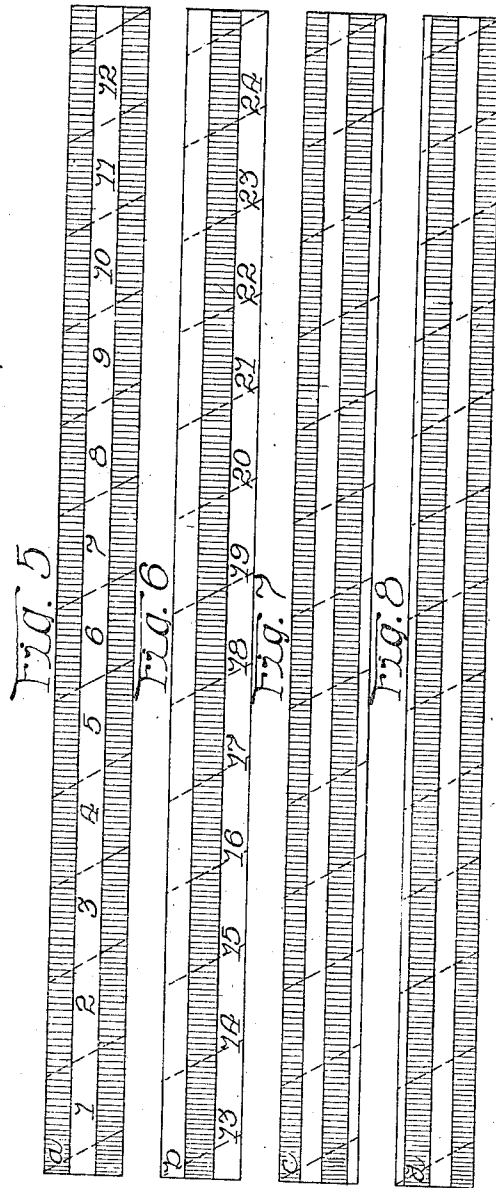
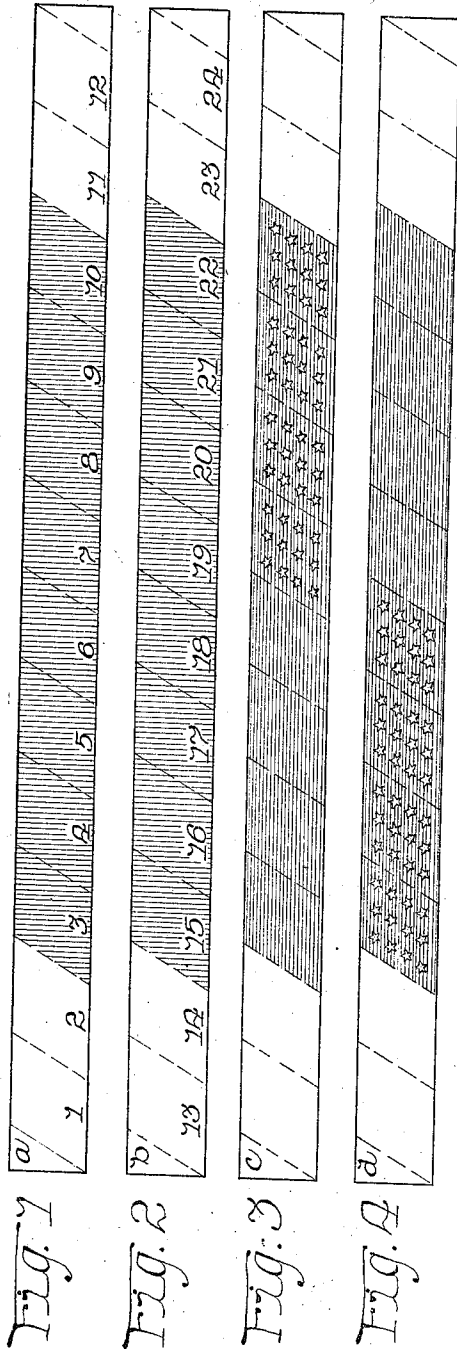


1,307,331.

E. A. CHRISTOPH,
BUILDING BLOCKS.
APPLICATION FILED MAR. 26, 1918.

Patented June 17, 1919.
2 SHEETS—SHEET 1.



Inventor
Edward A. Christoph
By Brown, Hanson & Baettcher
Attorneys

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2 SHEETS—SHEET 2.

Fig. 9

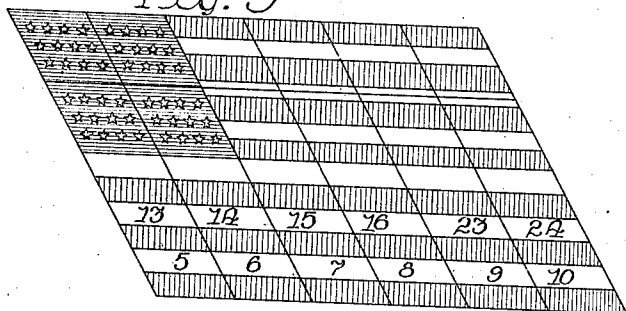


Fig. 10

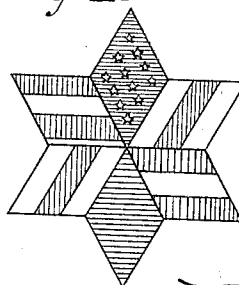


Fig. 11

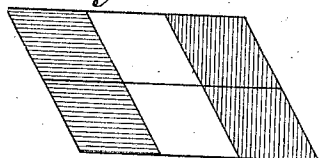


Fig. 12

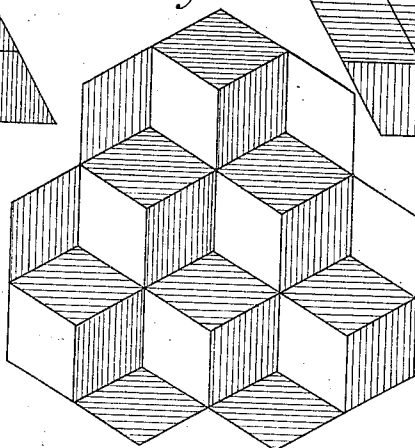


Fig. 13

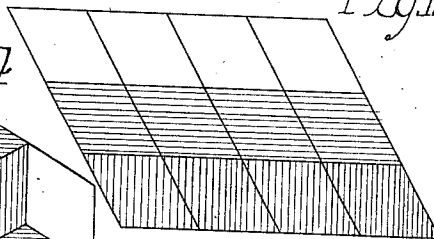


Fig. 14

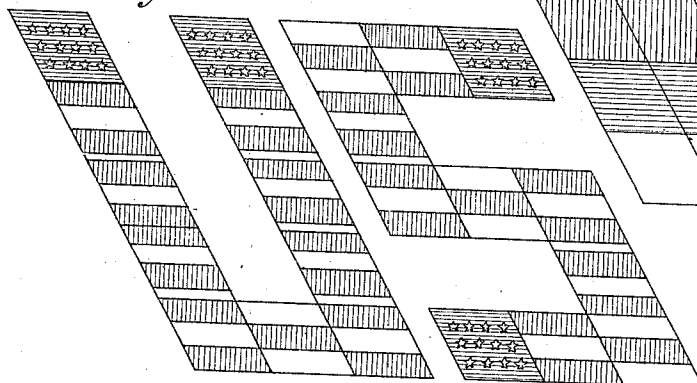
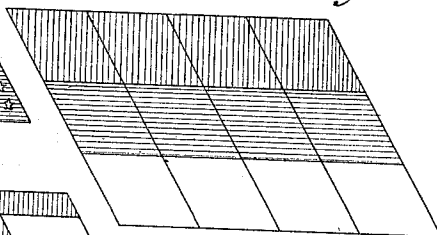


Fig. 15



Inventor
Edward A. Christoph
By Brown, Hanson & Bottel
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD A. CHRISTOPH, OF CHICAGO, ILLINOIS, ASSIGNOR TO JACOB W. ELOYN, OF CHICAGO, ILLINOIS.

BUILDING-BLOCKS.

1,307,331.

Specification of Letters Patent.

Patented June 17, 1919.

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To all whom it may concern:

Be it known that I, EDWARD A. CHRISTOPH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Building-Blocks, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to building blocks.

More particularly my invention relates to building blocks having printed or painted on one side thereof certain patterns and on another side thereof different patterns, from which a plurality of patriotic emblems, puzzles and like objects may be constructed.

The blocks are of uniform size and may be cut from any suitable material, such as wood, fiberboard, heavy cardboard or the like. The blocks are cut from strips of the material, after the material has been properly prepared by smoothing off the surfaces on all sides and by printing or painting the top and bottom surfaces in a certain manner hereinafter described in detail. Each set consists of a plurality of blocks, from which a variety of patriotic emblems, such as the American, French, Serbian and Russian flags, the letters U. S., puzzles and like objects may be built.

The object of my invention is to provide a set of blocks out of which objects may be constructed when the blocks are turned over and arranged in a different manner, other objects may be constructed.

Another object of my invention is to provide a set of blocks out of which a variety of patriotic emblems may be constructed when one side of the blocks is employed and when the blocks are turned over a puzzle or other object may be constructed, thus teaching the child patriotism, as well as providing amusement.

Another object of my invention is to reduce the cost of manufacturing the blocks and to this end I employ a novel method of manufacture which results in a saving of material and labor.

These and other objects of my invention will be more clearly understood by reference to the following specification and the accompanying drawings in which:

Figures 1, 2, 3, and 4 are plan views of

strips of material from which the blocks are cut;

Figs. 5, 6, 7 and 8 are plan views of the reverse side of the respective strips of material shown in Figs. 1, 2, 3 and 4;

Fig. 9 is a plan view of the blocks arranged to form the American flag;

Fig. 10 is a plan view of 6 blocks arranged to form a star;

Figs. 11, 12 and 13 are plan views of blocks arranged to form, respectively, the French, Russian and Serbian flags;

Fig. 14 is a view of the blocks arranged to form a puzzle or an optical illusion, and

Fig. 15 is a view of the blocks arranged to form the letters U. S.

The blocks are preferably of uniform size, and as shown in Figs. 1 to 8 inclusive, they are cut from strips of material, 12 blocks being obtained from each strip. The strips of material may be colored on both sides as shown in the drawing. The blocks are sold preferably in sets of 24 pieces. While two strips of material will provide 24 blocks, due to the combination of colors which must be available to build the American flag, and in order to keep down the cost of manufacture, the blocks are manufactured in lots of two sets from 4 strips of material.

In order to acquaint those skilled in the art as to my preferred method of manufacture, I will describe in detail each step in the order in which it is taken.

The four strips of material are selected and the sides and edges are planed, sandpapered or otherwise smoothed down to provide a finished surface. The painting or printing step is the next taken and is performed by employing suitable dies.

In Figs. 1 and 2 it will be noted that the strips *a* and *b* are alike so far as the surface shown is concerned and are, therefore, printed from the same die. The strips *c* and *d* are also alike so far as the surface shown in Figs. 3 and 4 is concerned and are also printed from one die. Three dies are employed to print the surfaces on the reverse sides of the strips which are shown in Figs. 5 to 8 inclusive. On the reverse side the strip *a* is printed with a die to provide red stripes on the edges with a white stripe in the center. The strip *b* on the reverse side is printed with a die to provide white stripes on the edges with a red stripe in the center,

The reverse sides of the strips *c* and *d* are printed from the same die to provide on one edge a red stripe, then a white stripe, then a red stripe and lastly one-half of a white stripe. In printing the reverse side of the strips *c* and *d* care must be taken to turn one of the strips around end for end, otherwise it will not be possible to build a perfect American flag, as will hereinafter be pointed out. After the dye or paint used to form the patterns has become thoroughly dried, the strips may be given a coat of varnish or shellac to give a more finished appearance. Each strip is then cut into 12 pieces as indicated in the drawings by the dotted lines, the strips being cut preferably on an angle of 60 degrees to form diamond shaped blocks, the only waste material being the small corner pieces on the ends of the strips.

In Fig. 9 I have illustrated an American flag built from one set of blocks, consisting of 24 pieces. To build the flag either the strips *c* or *d* may be taken and when properly arranged will form the upper half of the flag. The four pieces on which the stars are printed are first arranged in the upper left hand corner. Assuming, for example, that the blocks which are cut from the strip *d* are being employed, and referring now to Fig. 8 it will be seen that after taking out the four blocks on which the stars are printed, eight blocks will remain, each block being printed to form a red stripe, a white stripe, then a red stripe and lastly one-half of a white stripe. These eight blocks are arranged as shown in Fig. 9 to form the seven upper stripes of the flag. It will be noted that in order to form the fourth stripe, which is a white one, four of the blocks are turned around and matched against the other four blocks. The blocks cut from the strips *a* and *b* have been numbered in order to show clearly how it is not possible to build a perfect flag from the blocks cut from two strips without employing a greater number of dies than hereinbefore mentioned and involving extra labor and expense. To build the lower half of the flag it is necessary to employ six blocks cut from the strip *a* and six blocks cut from the strip *b*. In Figs. 1 and 2 it will be noted that there are eight plain white blocks and 16 plain red blocks. In building the lower three stripes of the flag I have taken the blocks 5, 6, 7, 8, 9 and 10, cut from the strip *a*, these blocks providing on the reverse side, as shown in Fig. 5, two red stripes, with a white stripe between. From Fig. 1 it will be noted that the blocks 5, 6, 7, 8, 9 and 10 are painted red on the opposite side. The remaining portion of the flag is built by taking the blocks 13, 14, 15, 16, 23 and 24 cut from the strip *b*. These blocks provide two white stripes and one red stripe and complete the flag. On the reverse side it will

be noted from Fig. 2 that the blocks 13, 14, 23 and 24 are white, and the blocks 15 and 16 are red on the reverse side. Checking the blocks, it will be found that the lower half of the flag, consisting of 12 blocks are colored on the reverse side to provide eight red blocks and four white blocks, which combination is essential in order to build the other objects shown in Figs. 10 to 14 inclusive and checking the matter further it will be found that the remaining 12 blocks from the strips *a* and *b* have the same color combination on both sides as the blocks used to form the lower half of the flag shown in Fig. 9. It is not absolutely essential that the particular blocks shown in Fig. 9 be taken as it is obvious that any of the blocks 17 to 22 inclusive, may be employed in place of block 15, for example. The essential point to be observed is that six blocks must be employed from each of the strips *a* and *b* to complete the flag, and these must be selected so that the proper color combinations appear on the reverse side, otherwise the set will not be complete. It will now be apparent that by following out the method of manufacture hereinabove described, it is possible to obtain from the four strips of material, two complete sets of blocks exactly alike in all respects and it will also be apparent that by the same method of manufacture, it is not possible to make a complete set of blocks of 24 pieces from any two of the strips of material.

In Figs. 10 to 15 inclusive, I have illustrated a number of objects which may be built from a set of these blocks. It will be obvious that other objects of varying shapes and sizes may be built from a set of the blocks.

Since the blocks are painted or printed on the top and bottom sides, it requires considerable patience and work on the part of a child to build, for example, the American flag. It also requires a knowledge of the exact formation of the flag in order to arrange or assemble the blocks to form a complete and perfect flag.

The blocks are particularly useful in connection with kindergarten work, furnishing not only a means of amusement for children, but also teaching patriotism and bringing to their minds a clearer conception of the exact plan and formation of the American flag.

It will be obvious to those skilled in the art that the blocks may be made in a variety of shapes and sizes, for example, the strips of material may be square in cross-section and the blocks cut off at right angles, thus making the blocks in the shape of a cube. It will also be obvious that the patterns may be placed on one side and one edge instead of being placed on opposite sides and if desired patterns may be placed on all sides and

edges, thus making more difficult the task of matching the blocks to form the complete patterns. I do not intend, therefore, to be limited to the exact construction described herein in detail as many modifications will suggest themselves to those skilled in the art.

What I claim is:

1. A set of play blocks adapted to be associated to produce, among other designs, the simulation of the American flag in proper colors, the blocks being uniform as to size and shape and adapted to be associated in four horizontal rows in the flag, each block which forms the flag being either red and white or blue and white.

2. A set of play blocks adapted to be associated to produce various emblems, including the simulation of the American flag in proper colors, the blocks being uniform as to size and shape and adapted to be associated in four horizontal rows in the flag, no single block carrying more than one color other than white.

3. A set of play blocks adapted to be associated to produce various emblems, including the simulation of the American flag in proper colors, the blocks being uniform as to size and shape and having 60 deg. angles at their corners, and adapted to be associated in four horizontal rows to produce the flag, the field and opposed seven red and white stripes constituting two rows or blocks and the six full length red and white stripes constituting the remaining two rows of blocks.

4. The herein described method of manufacturing play blocks for making the simulation of the American flag in proper colors, which consists in taking four identical strips, printing identical patterns on one side of each of two of the strips in red, and a different pattern on each of the other two strips in blue, the patterns on the second two strips being identical with each other, printing parallel stripes on the opposite face of one of the first two strips, the stripes running from end to end and consisting of two red stripes separated by a white stripe, printing similar but complementary red and white stripes on the opposite side of the other of the first two strips, then printing the opposite sides of the second two strips from a single die and providing thereon two red stripes separated by a white stripe, and a half width white stripe on one edge of each, then cutting the four strips into similar blocks by parallel cuts, then dividing the blocks into two identical sets, each set made up of one half the blocks from each of the first two strips and all of the blocks from one of the second two strips, thereby producing two sets of blocks from said four strips and by the use of a minimum number of dies.

In witness whereof I hereunto subscribe my name this 22nd day of March, A. D. 1918.

EDWARD A. CHRISTOPH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."