Jan. 7, 1969 G. MORIN 3,420,527

MOSAIC-LIKE ARRANGEMENT

Filed Jan. 13, 1966

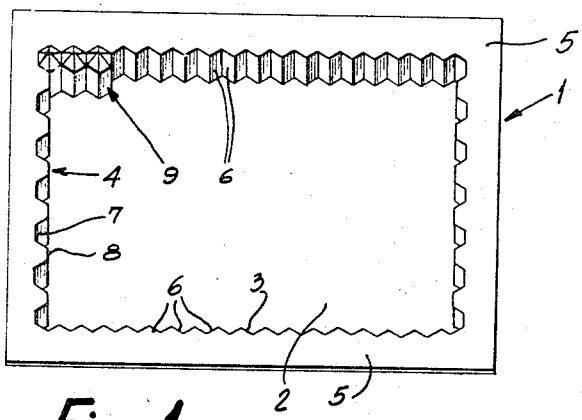


Fig. 1

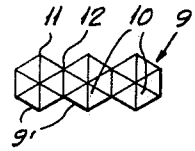


Fig. 3

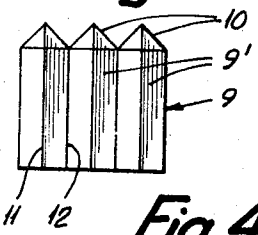
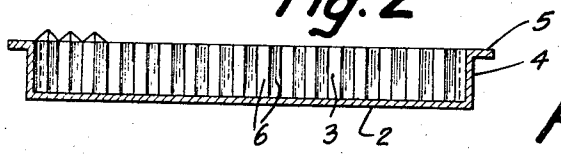


Fig. 4

Fig. 2



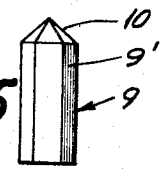


Fig. 5

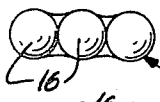


Fig. 6

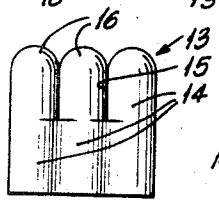


Fig. 7

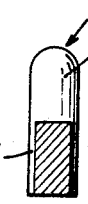


Fig. 8

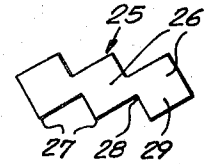


Fig. 12

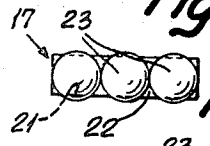


Fig. 9

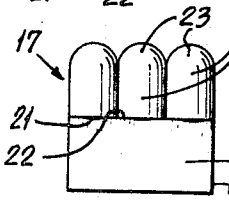


Fig. 10

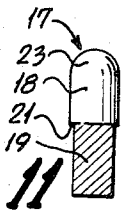


Fig. 11

Fig. 13

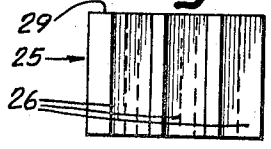
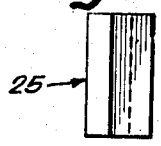


Fig. 14



INVENTOR
Gilles MORIN
BY Pierre Lespérance
PATENT AGENT

United States Patent Office 3,420,527 Patented Jan. 7, 1969

3,420,527

MOSAIC-LIKE ARRANGEMENT

Gilles Morin, 30 St. Charles St., St. John, Quebec, Canada

Filed Jan. 13, 1966, Ser. No. 520,519
U.S. Cl. 273—157 1 Claim
Int. Cl. A63f 9/10

ABSTRACT OF THE DISCLOSURE

This invention concerns a mosaic-like arrangement in which a plurality of separate pieces are adapted to fill a frame, each piece having at least two elemental components of similar shape and having a cross-section defining ribs at the side faces of the piece alternating with grooves at the junction of the elemental components, each piece having a base forming a continuation of the elemental components and defined by flat side faces which are recessed with respect to the ribs of the elemental components and which protrude with respect to the grooves; thus, the base forms downwardly facing shoulders with the ribs and upwardly facing shoulders with the grooves, whereby pieces of adjacent rows will interlock with respect to each other.

The present invention relates to a mosaic-like arrangement for decorative purposes and also for use as a game similar to so-called jig-saw puzzles.

The present invention resides in the provision of a system which is composed of a frame and of a plurality of small pieces arranged within said frame and filling the same to form a mosaic effect, the pieces providing a large number of information heads of different colors and/or shapes, the pieces being so arranged that they are interlocked one to the other and to the frame and remain in position without the aid of cement, glue or other binding material.

Another object of the present invention resides in the provision of a system of the character described, which, in accordance with a modification, can be arranged as a game similar to the jig-saw puzzle, wherein the different pieces must be arranged so as to form a complete picture, each piece carrying a picture portion, which, when the pieces are properly arranged, forms the complete picture.

The foregoing and other important objects of the present invention will become more apparent during the following disclosure and by referring to the drawings, in which:

FIGURE 1 is a perspective view of the frame for the system of the invention;

FIGURE 2 is a longitudinal section of the frame and showing one piece placed therein;

FIGURE 3 is a top plan view of a first embodiment of a piece;

FIGURE 4 is a side elevation of the first embodiment of the piece;

FIGURE 5 is an end view of the first embodiment of the piece;

FIGURE 6 is a top plan view of a second embodiment of a piece;

FIGURE 7 is a side elevation of the piece of FIGURE 6;

FIGURE 8 is a cross-section of the piece of FIGURE 6;

FIGURE 9 is a top plan view of a third embodiment of a piece;

FIGURE 10 is a side elevation of the piece of FIGURE 9;

FIGURE 11 is a cross-section of the piece of FIGURE 9;

FIGURE 12 is a top plan view of a fourth embodiment of a piece;

FIGURE 13 is a side elevation of the piece of FIGURE 12; and

FIGURE 14 is an end view of the piece of FIGURE 12.

Referring now more particularly to the drawings in which like reference characters indicate like elements throughout, FIGURE 1 shows, in perspective view, a frame generally indicated at **1**, similar to a picture frame and characterized by the fact that it has a pan-like rectangular shape provided with a flat bottom **2**, upstanding longitudinal walls **3** and end walls **4**, and an outwardly directed flange **5** at the free edge of walls **3**.

Longitudinal walls **3** have a saw edge shape, when seen in plan section, forming flat faces **6** of equal width and equally inclined at an angle of 120 degrees with respect to each other.

The end walls **4** are formed of a series of equally spaced notches, each constituted by three walls of equal width and making an angle of 120 degrees between each other, the bottom wall **7** of the notch being parallel to the wall face **8** between the adjacent notches, the wall face **8** being equal in width to the three walls of the notches.

The pieces **9** constituting the mosaic in accordance with the first embodiment, consist of two, three or more elemental components formed by hexagonal prisms **9'** joined together by a common flat face, the prisms **9'** being in alignment. The head or exposed end of the prisms are formed with an hexagonal pyramid **10** defining an information head. Prisms **9'** form ribs **11** and grooves **12** at the sides of pieces **9**.

Pieces **9** are disposed in longitudinal alignment within frame **1** to form rows parallel to the longitudinal wall **3**. FIGURE 1 shows one such piece **9** engaging the notches of a longitudinal wall **3** and an adjacent notch of an end wall **4**. Other pieces **9** will be disposed in alignment with the piece already in position to form a complete row and the next row will start from the outer flat face **8** of the end wall **4**, so that the pieces **9** of the second row will have their ribs **11** engaging the grooves **12** of the pieces **9** of the first row. Thus, all the pieces are interlocked against relative movement along a row and the pieces of each alternate row have their heads **10** staggered with respect to the heads of the pieces of the other rows.

Because the pieces **9** interlock with each other and with the walls of the frame **1**, it is easy to assemble the pieces **9** within the frame without the pieces **9** becoming displaced.

Once the frame **1** is filled with the pieces **9**, only the heads **10** of said pieces are apparent. These heads may be of different colors and the pieces **9** may be arranged in accordance with the colors of their heads **10** so as to eventually form a decorative design.

The pyramidal-shaped heads **10** give an effect of perspective or relief. The heads **10** of the constituting prisms of a single piece **9** may have different colors, or be all of the same colors. One frame **1** may be filled with pieces **9**, having a different number of prisms **9'**.

It will be noted that the outer faces **8** of one end wall **4** are staggered with respect to the same faces of the other end wall, in order to fit the different rows of pieces **9**.

FIGURES 6, 7, and 8 show a second embodiment of the pieces constituting a mosaic in accordance with the invention. The pieces, indicated generally at **13**, may consist of two or more cylinders **14** arranged side by side in a straight plane and integral with each other in the lower portion of the piece **13**, while separated from each other in the upper portion, as shown at **15**.

The top end of piece **13**, and more specifically of each cylinder element **14**, is rounded as shown at **16**, thereby forming an information head which may be colored, if

desired, of the same color for all the heads of one piece **13**, or of different colors for the same piece. Thus, the side walls of piece **13** have a wave-like cross-sectional shape so that two pieces **13** can be placed side by side in staggered relationship such that adjacent rows of pieces **13** will have their heads **15** in staggered relationship with respect to one another. Also, the pieces of different rows interlock with one another, as in the first embodiment.

Naturally, the inside faces of the walls of the frame adapted to receive pieces **13** will have a wavy shape to conform to the wavy shape of the side walls of pieces **13**, while the inside faces of the end walls **14** are shaped to conform with the exposed semi-cylindrical surfaces of the cylindrical elements **14** of the staggered pieces **13** of the different rows.

The fact that the pieces **13** are slit, as shown at **15**, in their upper portion, gives the appearance that, in the complete mosaic, each cylinder element **14** is separate from the other and that the lines of demarcation between various pieces **13**, are not visible.

FIGURES 9 to 11 show a third embodiment wherein the pieces **17** consist of two, three, or more cylinder elements **18** arranged in a straight line and disposed side by side and depending from a common block-shaped base **19** having parallel flat side faces **20**, which are recessed inwardly from the projecting side curved surfaces of cylinder element **18**, so as to define a downwardly facing step or shoulder **21** therewith, and which protrude from the grooves formed at the junction of two cylinder elements **18** to define an upwardly facing shoulder **22**.

When pieces **17** are disposed side by side in different rows, the cylinder elements **18** of one row will be in staggered relationship with the cylinder elements of the other row and engage at their shoulder **21** the upwardly facing shoulder **22** between two cylinder elements **18** of the pieces of the next row. Therefore, there is achieved not only an interlocking of the pieces **17** of the two adjacent rows against movement of the pieces of one row longitudinally with respect to the pieces of the other row, but also an interlocking preventing removal of the elements from within the frame without lightly forcing the side walls of the latter outwardly.

In the inserted position of the pieces **17** within the frame, the flat side faces **20** of the pieces of one row will be in direct contact with the flat faces **20** of the pieces of an adjacent row.

The cylinder elements **18** of the pieces **17** may be so arranged so as to protrude completely from the flange corresponding to flange **5** of the frame receiving the pieces **17**, in which case the inside faces of the walls of said frame will be flat, while the end faces would be provided with series of equally-spaced square notches to receive the ends of the bases **19** of alternate rows.

The semi-spherical heads **23** of the cylindrical element **18** may be painted different colors.

FIGURES 12 to 14 show still another embodiment of the pieces wherein each piece **25** may consist of two, three or more square prisms **26**, disposed side by side and in alignment and rotated to about sixty degrees with respect to the common main plane of the piece **25**.

The crests **27** of pieces **25** of one row will engage the grooves **28** of the pieces **25** of the adjacent row, such that the pieces of one row will be staggered with respect to the pieces of the next row.

The longitudinal walls of the frame receiving pieces **25** will be shaped as irregular saw teeth, to engage the

grooves **28** and crests **27** and the end walls of the frame will be shaped to receive the ends of the staggered pieces **25**.

Pieces **25** may have a flat top face **29** bearing a portion of a picture so that the several pieces **25** filling the frame will form, when in proper position, a complete picture whereby this system can be used as a kind of jig-saw puzzle wherein only the coloring of the top faces of the different pieces **25** will direct the user to form the composite picture.

In this embodiment, there is, as in the previous embodiment, interlocking of the different pieces **25** so as to prevent relative movements one with respect to the other during filling of the frame with said pieces.

The top or head of all the pieces of the other embodiments could be made flat and bear a portion of a composite picture, so that these other embodiments may also be used as a kind of puzzle.

While preferred embodiments in accordance with the invention have been illustrated and described, it is understood that various modifications may be resorted to without departing from the spirit and scope of the appended claim.

What I claim is:

1. A mosaic-like arrangement comprising a frame and a plurality of separate pieces filling said frame, each piece consisting of at least two elemental components of similar shape integrally connected together and disposed side by side, said elemental components having a cross-section defining ribs at the side faces of said piece alternating with grooves at the junction of said elemental components, said elemental components each having a head exposed to view with said pieces arranged in end-to-end relationship in parallel rows in said frame, the heads of one row of pieces being staggered with respect to the heads of the next row of pieces, and wherein each piece has a base forming a continuation of said elemental components and defined by flat side faces which are recessed with respect to the ribs formed by said elemental components and which protrude with respect to the grooves formed at the junction of said elemental components, said base forming downwardly facing shoulders with said ribs and upwardly facing shoulders with said grooves whereby pieces of adjacent rows will interlock with respect to each other, not only against longitudinal movement of the pieces of two adjacent rows, but against movement of the pieces of one row with respect to the pieces of the other adjacent rows into and out of said frame.

References Cited

UNITED STATES PATENTS

2,759,295	8/1956	Keuls	46—16
3,247,638	4/1966	Gay	52—392 X

FOREIGN PATENTS

858,634	5/1940	France.
1,232,715	4/1960	France.
917,655	9/1946	France.
1,353,458	1/1964	France.
633,951	12/1949	Great Britain.

ANTON O. OECHSLE, *Primary Examiner.*

U.S. Cl. X.R.

35—27; 46—25; 161—18, 39, 41; 52—392; 46—16