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EXTRUDED CROSS SECTIONS FOR ARCHITECTURAL SCREENS

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FIG. 1

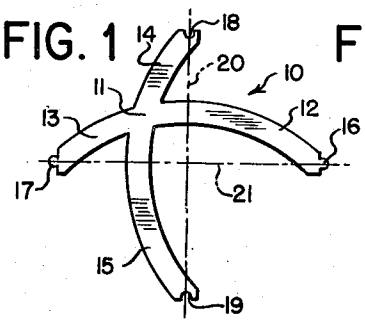


FIG. 2

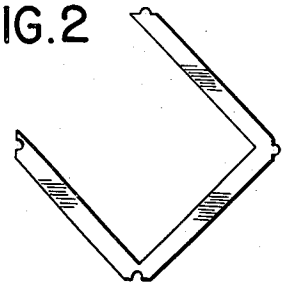


FIG. 3

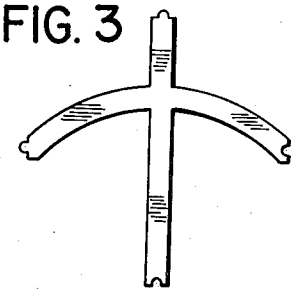


FIG. 4

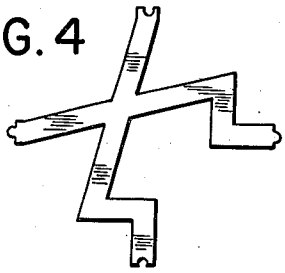


FIG. 5

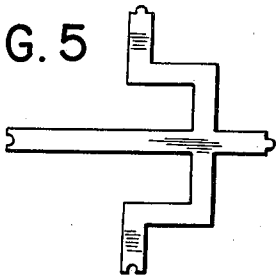


FIG. 6

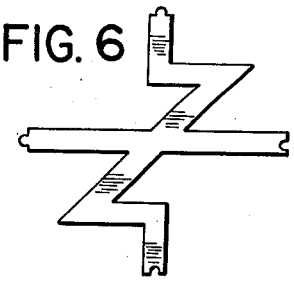


FIG. 7

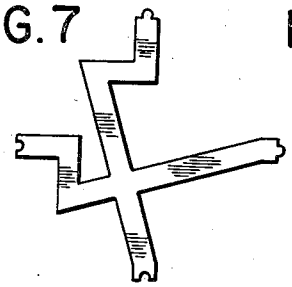


FIG. 8

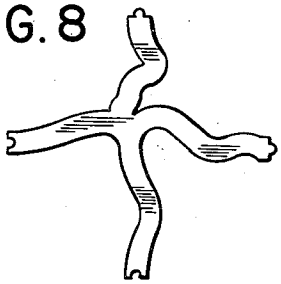


FIG. 9

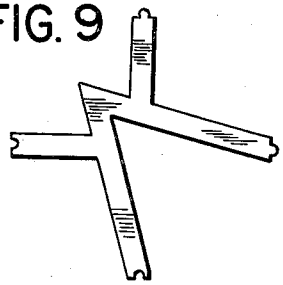


FIG. 10

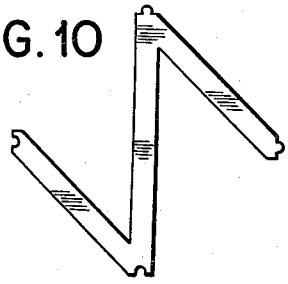


FIG. 11

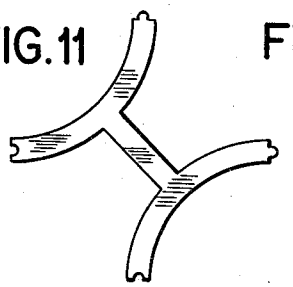
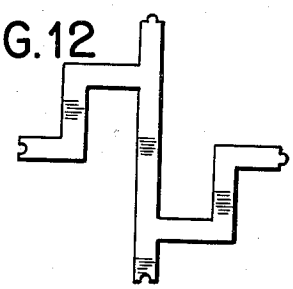


FIG. 12



INVENTOR
Reid L. Katan
BY
Pennie, Edmonds, Mahn, Barras & Taylor
ATTORNEYS

Sept. 10, 1963 R. L. KATAN 3,103,264

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FIG. 13

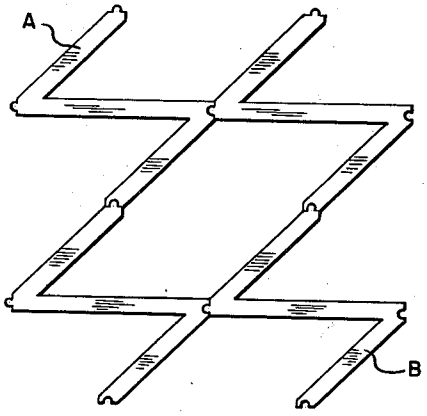


FIG. 13a

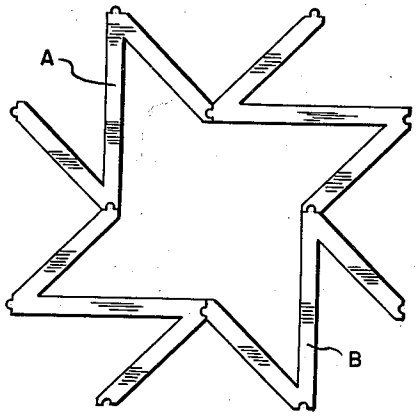


FIG. 14

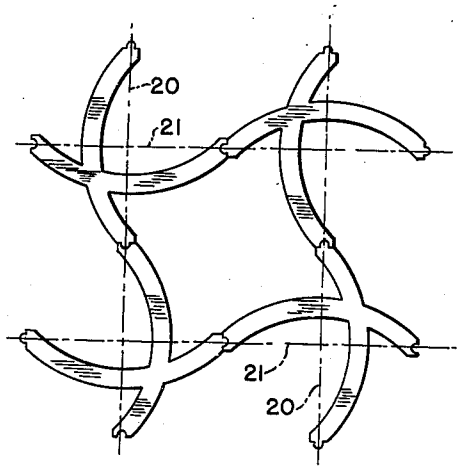
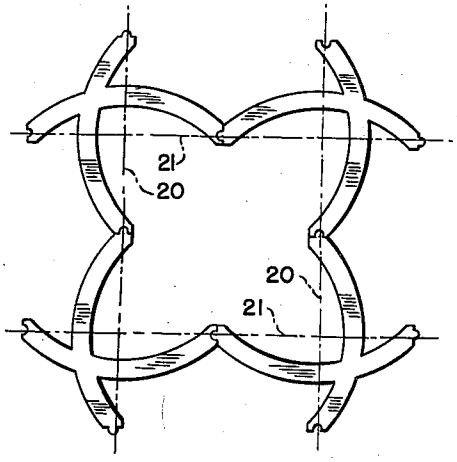


FIG. 14a



INVENTOR
Reid L. Katan
BY
Pennie, Edmonds, Morton, Barrows & Taylor
ATTORNEYS

Sept. 10, 1963 R. L. KATAN 3,103,264

EXTRUDED CROSS SECTIONS FOR ARCHITECTURAL SCREENS

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FIG. 15

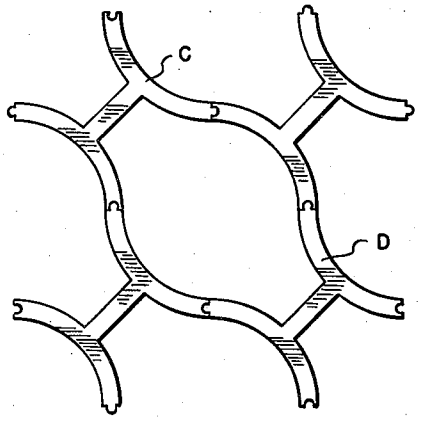


FIG. 15a

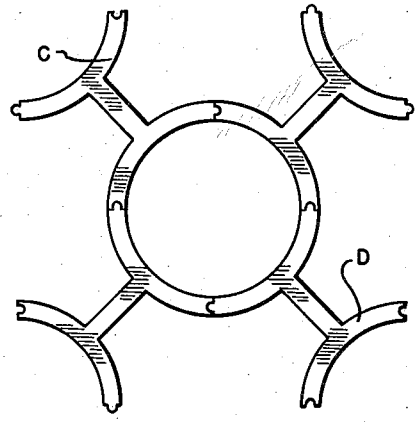
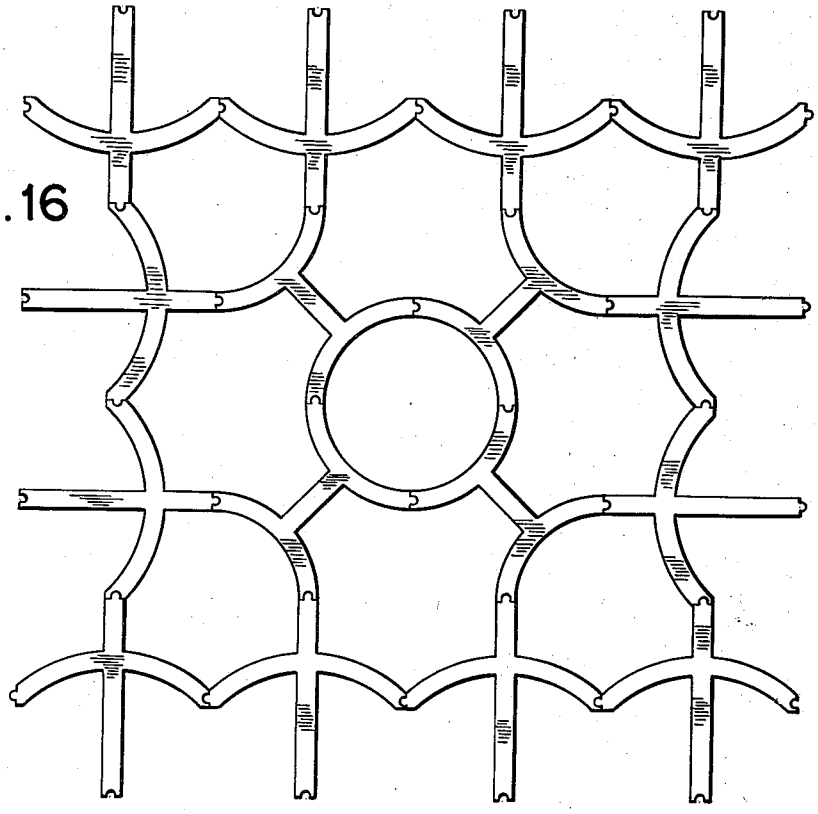


FIG. 16



INVENTOR
Reid L. Katan
BY
Pennie, Edmonds, Morton, Barrows & Taylor
ATTORNEYS

United States Patent Office 3,103,264 Patented Sept. 10, 1963

3,103,264

EXTRUDED CROSS SECTIONS FOR ARCHITECTURAL SCREENS

Reid L. Katan, Waterbury, Conn., assignor to Anaconda American Brass Company, a corporation of Connecticut

Filed Mar. 16, 1961, Ser. No. 96,320
2 Claims. (Cl. 189—82)

This invention relates to units for use in forming architectural screens and more particularly to architectural screen units which can be interconnected with other similar units to form screens having selectively variable patterns.

It is an object of the invention to provide units for architectural screens which meet certain basic requirements so as to permit a plurality of such units to be interconnected with similar units which meet the same basic requirements. It is also intended to construct these units with many different designs so that an infinite number of widely variant patterns can be formed by interconnecting the units.

The units of the present invention offer the architect a unique and unusual advantage never heretofore available to him; namely that of enabling the architect to obtain originality of design in architectural screens without having to first develop a pattern. According to the invention, the architect need only design a unit or units having numerous design permutations and combinations, and then owing the ability of these units to be interconnected new and differently patterned architectural screens can be formed, limited only by the imagination of the architect.

The unit of the present invention which is adapted to be interconnected with other similar units to form architectural screening having selectively variable patterns consist of a body element having four extremities located at the respective ends of two mutually perpendicular bisecting straight lines. Connecting means are provided at the extremities for attachment to extremities of four other similar units. The unit is further characterized in that the part of the body element in any one quadrant formed by the perpendicular lines is shaped differently from the portion of the body element in at least one of the remaining quadrants.

A preferred embodiment of the architectural screen units is described hereinbelow with reference to the drawing wherein:

FIGS. 1–12 are elevations of architectural screen units of different designs;

FIGS. 13 and 13*a* are elevations of a portion of an architectural screen formed by interconnecting the units shown in FIG. 10;

FIGS. 14 and 14*a* are elevations of a portion of an architectural screen formed by interconnecting the units of FIG. 1;

FIGS. 15 and 15*a* are elevations of a portion of an architectural screen formed by interconnecting the units of FIG. 11; and

FIG. 16 is an elevation of a portion of an architectural screen formed by interconnecting the elements shown in FIG. 3 and FIG. 11.

Referring initially to FIG. 1, a unit **10** which consists essentially of a body element **11** having four extremities **12, 13, 14** and **15** is shown. Connecting means in the form of tongues **16** and **17** and grooves **18** and **19** are formed on the extremities. In FIG. 1 the tongues are formed on the extremities **12** and **13** and the grooves are formed on the extremities **14** and **15**. It is not intended that the units be limited to tongues and grooves formed on the particular extremity shown, rather it is intended that these connecting means be formed on the extremities

in a manner most favorable to be interconnected with other similar units.

The units shown in FIGS.1–12 have been continuously extruded into the designs shown, in such a manner that they are capable of being interconnected with units of the same design as well as with all other similar units such as shown in the figures, to form architectural screens having widely different patterns. These units have then been cut to the desired length which might vary from a fraction of an inch to several inches depending upon whether the screens are to be used interiorly, exteriorly, for decoration alone, or for decoration as well as for structural support. It is particularly desirable to extrude these units from bronze, however, it is not intended that the units should be limited to this particular metal.

It is to be noted that each of the units shown in FIGS. 1–12 meet certain basic requirements which permit these units to achieve their intended purpose of being capable of being interconnected with any other similar unit so that selectively variable patterns in architectural screens may be formed. One of the basic requirements to be met consists in having the four extremities **12, 13, 14,** and **15** located in the respective ends of two mutually perpendicular bisecting co-planar straight lines **20** and **21** of equal length which are indicated in the figure. Fulfillment of this requirement enables all similar units to be interconnected. The other requirement which must be met is that the part of the body unit in any one quadrant formed by the perpendicular lines is shaped differently from the portion of the body unit in at least one of the remaining quadrants. It is precisely this second requirement which allows a plurality of different architectural screen patterns to be formed by interconnecting a plurality of these units.

The units shown in FIGS. 2–12 fulfill the two requirements set forth above. The connecting means of each of these units meet the first requirement in that the connecting means are located at the respective ends of two mutually perpendicular bisecting straight lines of equal length. The second requirement that the portion of the body unit looked at in any one quadrant can be of any design provided it is shaped differently from the portion of the body unit in at least one of the remaining quadrants is also met in each figure. Hence an infinite number of units, differently designed, but meeting the basic requirements set forth can be formed.

It is also to be noted that the tongue and groove connecting means are not critical to the practice of this invention. It has been found for example, that a dovetailed joint could be substituted as well. It is further contemplated that the units could be extruded with either all male or all female connecting means, with the units being joined by employing a separate rectangular metal piece having double male or double female connecting means formed thereon.

In most applications it is desirable to permanently secured the units together and especially when they are to be used for structural purposes. It has been proposed that the units can be permanently secured by squeezing the joints together so as to deform the metal slightly or by interlocking the metal at the joints with a prick punch. Other methods include upsetting the metal slightly and soldering at the joints, or burnishing the metal at the joint with a sand belt so as to overlap the metal slightly from one unit to the other.

FIGURES 13 and 13*a* show two of the many designs which can be obtained by joining units of the same type together. In FIG. 13 the units shown in FIG. 10 have been joined to describe substantially zigzag pattern. By rotating unit A in the upper left-hand corner and unit B in the lower right-hand corner of FIG. 13 90° in

either direction a substantially different design has been achieved in FIG. 13*a*.

In FIGS. 14 and 14*a* the unit shown in FIG. 1 has been interconnected with like units to form the screens shown. A substantially smooth intersecting wave design has been formed in FIG. 14 and by simply rotating each of the units in FIG. 14 in a clockwise direction a somewhat cloverleaf pattern evolves. It is quite apparent from FIGS. 14 and 14*a* wherein the two mutually perpendicular bisecting coplanar straight lines of equal length are indicated, that it is precisely owing to the connecting means being formed on the extremities at the end of each of these lines that these units can always be interconnected with any other similar unit.

In FIGS. 15 and 15*a* the unit shown in FIG. 11 has been interconnected with like units to form two differently patterned screens. The screen design of FIG. 15 is simply transferred into the circular design of FIG. 15*a* by rotating element C in the upper left-hand corner and element D in the lower right-hand corner of FIG. 15 90° in either a clockwise or a counterclockwise direction.

FIGURE 16 demonstrates one of many unique patterns which can be formed by interconnecting two differently designed units. The units of FIG. 11 have been connected to form the pattern shown in FIG. 15*a*, and the units of FIG. 3 surround this pattern to complete a circular design and thereby present an aesthetically appealing pattern.

I claim:

1. An extruded metal unit to be interconnected with other similar units to form architectural screening having selectively variable patterns, said unit comprising a body element having four extremities located at the respective ends of two mutually perpendicular bisecting straight lines of equal length, and connecting means at the ends of each of said extremities so arranged that each attaches to an extremity of four other similar units to circumscribe an area, that part of said body element exclusive of said connecting means in any one quadrant formed by said perpendicular lines being shaped differently from the portion of said body element in at least one of the remaining quadrants.

2. An extruded metal unit to be interconnected with other similar units to form architectural screening having selectively variable patterns, said unit comprising a body element having four extremities located at the respective ends of two mutually perpendicular bisecting straight lines of equal length, and connecting means at the ends of each of said extremities so arranged that each attaches permanently to an extremity of four other similar units to circumscribe an area, that part of said body element exclusive of said connecting means in any one quadrant formed by said perpendicular lines being shaped differently from the portion of said body element in at least one of the remaining quadrants.

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