A spacer assembly is used in forming a mortarless wall of glass blocks and comprises a spacer and a spacer connector. A wall of glass blocks can be formed solely from the spacer and the spacer connector. The spacer has a body that can comprises channels that are filled with a mortarless adhesive, such as silicone, that operate to bond the spacer to a glass block. The spacer body can also have wings that provide structural stability for the glass blocks. Recesses in the spacer body serve to engage serrated or non-serrated tabs from the spacer connectors. The spacers can used in both the horizontal and vertical courses of a glass wall.
SPACER ASSEMBLY FOR GLASS BLOCKS

FIELD OF THE INVENTION
[0001] The present invention relates generally to a spacer assembly for spacing glass blocks in a wall formed from such blocks.

BACKGROUND OF THE INVENTION
[0002] Due to their aesthetically pleasing nature, glass blocks are widely used in architecture and in the construction industry in structures such as walls, windows, and partitions. Where applicable, such structures are known to be built both inside and outside the home. These structures can be formed from both rectangular and non-rectangular glass blocks, and consequently can be curved or planar.

[0003] While a variety of different techniques exist for constructing glass walls, all techniques can be broadly classified as either being of mortar or mortarless construction.

[0004] The use of mortar in construction requires the skills of a person specifically trained in such construction. Numerous problems must be overcome before a glass wall can be successfully constructed using mortar. These problems include that the mortar must be evenly laid so as to ensure a level wall; the use of mortar leads directly to an increase in dust and dirt in the construction area; glass blocks tend to be non-porous and thus do not easily or strongly bond to mortar; and the glass wall must not be assembled too quickly, lest the weight of the blocks result in mortar being squeezed out from the lower courses of the wall.

[0005] In an attempt to address these problems, mortarless construction methods have been developed. Mortarless construction methods are generally characterized by the use of spacers interposed between glass blocks that ensures a uniform spacing between the blocks. A sealant or adhesive may be applied to the spacer before interposition between glass blocks so as to effect complying between adjacent glass blocks once the spacer is positioned therebetween, and provide shear strength. Grout/sealant is then applied to the spaces between blocks to provide sealing against wind and water.

[0006] An example of a commercially available mortarless spacer assembly is manufactured by Seattle Glass Block under the brand name Vinyl Stack®. This assembly includes multiple spacer elements including a horizontal spacer and a vertical spacer. The horizontal and vertical spacers do not interconnect and must be adhered to glass blocks using a judicious amount of silicone. The silicone tends to smear over the surface of the glass blocks, thus decreasing the aesthetic appeal of the block wall. Some spacer elements consist of two parts that require connection for non-perimeter installation. This system may or may not require an extruded plastic perimeter channel depending upon the installation. It also requires the use of a specialty hydraulic grout for strength. Both the perimeter channel and the grout are available only in white.

[0007] A number of mortarless spacer assemblies are disclosed by patents, such as U.S. Pat. No. 5,485,702. This patent discloses a spacer assembly that requires that an end user measure and cut a spacer to the correct lengths, thus demanding a relatively high level of skill of the end user. It also requires a strap to be placed around the circumference of the planned glass wall in order to provide stability during construction. Furthermore, the structural stability provided by the spacer assembly is limited, as the spacers running along the vertical and horizontal courses are not connected and thus, to a large degree, cannot reinforce each other.

[0008] U.S. Pat. No. 5,907,937 discloses a mortarless spacer assembly comprising three parts: an intermediate junction spacer, an end junction spacer, and edge members. The greater the number of parts present, however, the more skilled in construction the end user must be, and the greater the cost to manufacture the assembly. The use of this mortarless spacer also requires the glass wall to be built within some type of rectangular frame for stability.

[0009] U.S. Pat. No. 6,823,634 B2 discloses a horizontal spacer system that includes a horizontal spacer that connects with other, similar horizontal spacers along the horizontal courses of a glass wall. The structural stability provided by such a system is limited, however, as the horizontal spacers do not specifically address the problem of rotational motion that may cause glass blocks to tilt out of the plane of the wall during construction, and as no vertical spacers exist to further stabilize the wall.

SUMMARY OF THE INVENTION
[0010] It is an object of the invention to provide a spacer, connector, or a kit comprising a spacer and/or a connector that provides at least some solutions to the deficiencies in the prior art.

[0011] In one aspect, there is provided a kit for facilitating the construction of a structure comprising a plurality of glass blocks, comprising:

[0012] a spacer configured for positioning between a first glass block and a second glass block;

[0013] a connector including:

[0014] a first connection tab configured for coupling to the spacer, such that the spacer is disposed in a first position when the spacer is coupled to the first connection tab; and

[0015] a second connection tab configured for coupling to the spacer, such that the spacer is disposed in a second position when the spacer is coupled to the second connection tab;

[0016] such that the first position is rotationally displaced relative to the second position;

[0017] wherein at least one of the first and second connection tabs is frangibly connected to a respective remainder of the connector.

[0018] The spacer can further comprise: a first channel having a first channel longitudinal axis, and a second channel having a second channel longitudinal axis. Each of the first and second channels is configured for receiving a binder to effect adhesion of the spacer to one of the first and second glass blocks. The first channel can be coupled to a second channel by each of a first rib and a second rib. Each of the first and second ribs includes a respective longitudinal rib axis which is transverse to the respective longitudinal channel axis of each of the first and second channels, such that the first rib is spaced apart from the second rib to define a bore extending through the spacer.

[0019] In a further aspect, there is provided a kit for facilitating the construction of a structure comprising a plurality of glass blocks, comprising:

[0020] a spacer configured for positioning between a first glass block and a second glass block;

[0021] a connector including:

[0022] a connection tab for coupling to the spacer; and:
a guide plate including a guide surface configured for contiguous disposition with a respective surface of each of the first glass block and the second glass block when the spacer is coupled to the connection tab and is disposed between the first glass block and the second glass block, wherein a portion of the guide surface is defined by a fragile tab which is frangibly connected to a remainder of the guide plate.

BRIEF DESCRIPTION OF THE DRAWINGS

The method and apparatus of the preferred embodiments of the invention will now be described with the following accompanying drawings:

FIG. 1 is a perspective view of a section of glass block wall constructed using a spacer assembly comprising a spacer and a spacer connector in accordance with an embodiment of the invention.

FIG. 2 is a perspective view of the spacer.

FIG. 3 is a top plan view of the spacer.

FIG. 4 is an end elevation view of the spacer.

FIG. 5 is a side elevation view of the spacer.

FIG. 6 is a perspective view of the spacer connector.

FIG. 7 is a top plan view of the spacer connector.

FIG. 8 is a side elevation view of the connector.

FIG. 9 is a side elevation view of the connector at line A-A of FIG. 7.

FIG. 10 is an end elevation view of the connector.

FIG. 11 is a perspective view of one spacer connector connected to one spacer.

FIG. 12 is a perspective view of three spacers connected by spacer connectors.

FIG. 13 is a perspective view of three spacers connected by spacer connectors to form a spacer assembly surrounding a glass block.

FIGS. 14 and 16 illustrate various possible configurations of the connector.

FIG. 17 is a perspective view of a glass block.

FIG. 18 is a cross-sectional view of the end face profile of the block shown in FIG. 17.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

Directional terms such as “vertical” and “horizontal” are used in this description merely to assist the reader in understanding the described embodiments of the invention and are not to be construed as restricting the orientation of the embodiments in use or in relation to the another product, apparatus, or to the environment.

Referring to FIG. 1, there is provided a spacer assembly 1 according to one embodiment of the invention. The spacer assembly 1 functions as a kit for facilitating the construction of a structure comprising a plurality of glass blocks 500, such as a glass block wall construction. For example, the components of the spacer assembly 1 are injection molded.

Referring to FIGS. 17 and 18, the glass block 500 used is a typical glass block used in industry and comprises two parallel rectangular side faces 502a, 502b and four edge faces 504a, 504b, 504c, 504d. The edge faces 504a→d join the side faces 502a, 502b, at corresponding edges 506a, 506b thereof. Further the edge faces 504a→d are joined at each other at their respective ends to form a continuous edge 508 around the block 500. Referring specifically to FIG. 18, each of a pair of outer cusps 510a, 510b and central inner cusp 512 is defined in each of the edge faces 504a→d. The central inner cusp 512 is disposed intermediate the outer cusps 510a, 510b. Each of the outer cusps 510a, 510b is joined to the inner cusp 512 by a respective inner substantially concave portion 514a, 514b.

Referring to FIGS. 2 to 5 and 6 to 11, the spacer assembly 1 includes a spacer 10 and a connector 20. The spacer 10 is provided for positioning between a first glass block and a second glass block in order to precisely space the blocks apart both horizontally and vertically to achieve consistent spacing between the blocks along joints between the blocks in a block wall construction. The connector 20 is provided with multiple connection tab sets for connecting the connector 20 to a corresponding number of spacers 10. At least one tab set is rotationally disposed on the connector 20 from another tab set such that the two tab sets connect to different spacers 10 at different positions relative to each other. The connection tabs are frangible connected to the remainder of the connector 20.

Referring to FIGS. 2 to 5, for example, the spacer 10 has a generally flat, longitudinally elongated body and includes at least two longitudinally extending channels 12. Each of the channels has a respective longitudinal axis 121. The channels 12 are configured to receive and contain a binder that bonds the spacer 10 to one of the edge faces of an adjacent glass block 500. For example, the binder is a silicone adhesive. The channels 12 are coupled together by at least a pair of ribs 19. Each of the ribs 19 includes a respective longitudinal rib axis 191 which is transverse to the respective longitudinal axis 121 of each of the channels 12. The ribs 19 are spaced apart from each other to define a bore 11 extending through the spacer 10. The ribs 19 provide additional structural stability to a resultant glass wall. For example, and referring to FIG. 12, the ribs 19 are connected to one another with a transverse rib 21 which traverses the bore 11.

Although three channels 12 and five ribs 19 are shown in the example illustrated in FIGS. 2 and 3, a different number of channels and ribs may be provided within the scope of the invention. Referring to the example illustrated in FIGS. 2 and 3, the central channel 12 receives the central inner cusp 512 to fix the spacer 10 relative the glass block 500.

Provided at each longitudinal end of the spacer 10 is a female joint defined by a slot 16 which extend into the spacer’s body. The slot 16 serves to receive the connector 20, thereby connecting connector 20 and spacer 10 together. Although two slots 16 are shown at each end in this embodiment, a different number of slots 16 can be provided within the scope of the invention. Although not shown in FIG. 1, for example, the slots 16 are serrated so as to join with complementary serrations on horizontal tabs 22 of an exemplary connector 20 (see below) or to join with non-serrated vertical tabs 24 of the same exemplary connector 20. When joined with the horizontal tabs 22, the serrations serve to securely fasten the spacer 10 and connector 20 together in the horizontal direction, and when joined with the vertical tabs 24, the connector 20 is secured in the horizontal and downwards directions, but is easily removable from the spacer 10 in the upwards direction, thereby making it easier to assemble each row of glass blocks 500 during a glass block wall construction, as will be explained in more detailed below.

For example, the spacer 10 also includes two wings 14 extending transversely from each side edge of the spacer body. The wings 14 serve to interface with cusps 510a, 510b.
of the glass block 500, providing a consistent horizontal and vertical space between each of the glass blocks. The wings 14 also operate to provide structural stability by limiting the rotational motion of glass blocks 500 about the vertical plane to an extent needed for the wall to flex, but not more. In a preferred embodiment, the wings 14 are symmetrically located about the spacer body and are small in size so as not to negatively affect the aesthetically pleasing look of a glass wall. Although two pairs of wings 14 are used in this embodiment, a different number of wings 14 can be used within the scope of the invention, e.g. to change to extent of rotational stiffness about the vertical plane.

[0049] Referring to FIGS. 6 through 10, the spacer connector 20 comprises a central elongate body 40 and four pairs of connection tabs 22, 24 extending orthogonally from the body 40 form an “X” or cruciform shape. A lateral guide plate 30 extends from each end of the body 40. The entire spacer connector 20 is formed by injection molding; however it is within the scope of the invention to form the spacer connector 20 by other techniques as known in the art. The spacer connector 20 serves to connect up to four spacers 10 together, as well as to assist in laterally positioning the glass blocks 500 during construction.

[0050] The eight tabs 22, 24 consist of two pairs of serrated tabs 22 with teeth 26 and two pairs of non-serrated tabs 24. Each pair of serrated tabs 22 extend in opposite directions from the body 40, and each pair of non-serrated tabs 24 also extend in opposite directions from the body. The serrated tabs 22 are used to securely join the connector 20 to two spacers 10 that are placed along a horizontal portion of the circumferential edge of a glass block 500 so as to form a horizontal course of a glass block wall (hereinafter “horizontal tabs 22”). The non-serrated tabs 24 are used to join the connector 20 to two spacers 10 that are placed along a vertical portion of the circumferential edge of a glass block 500 so as to form a vertical course of the glass block wall (hereinafter “vertical tabs 22”).

[0051] The connector 20 is formed so that each tab 22, 24 and each lateral guide plate 30 are easily broken away from the rod 40. This enables the connector 20 to be used in any place in the wall, including at the sides and corners of the wall. For example, when the connector 20 is used in a central portion of the wall, all the horizontal and vertical tabs 22, 24 are used to connect four spacers 10 together. When the connector 20 is used at the side of the wall, one pair of horizontal tabs 22 are broken away (the tabs 22 facing the wall frame) so that the connector 20 has a “T” shaped configuration. When the connector 20 is used at the corner of the wall, one pair of horizontal tabs 22 and one pair of vertical tabs 24 are broken away (the tabs 22, 24 facing the corner) so that the connector has an “L” shaped configuration. The guide plates 30 are particularly useful to laterally position the blocks 500 during construction and to prevent movement during construction and setting of adhesive. As will be explained in detail below, parts of the guide plates 30 can be removed during wall assembly when the connector 20 is used at the edge of the glass block wall to prevent interfering with the wall’s frame. The guide plates 30 are broken away after the blocks 500 are assembled and are laterally secured in place by the adhesive and the adhesive has been allowed to set (cure).

[0052] To enable the tabs 22, 24 to be easily broken away from the rod 40, a notch 28 is formed into the surface of each tab 22, 24 near the base of the tab 22, 24 and extends in a direction parallel to the length of the connector body 40. The notches 28 resemble score lines in the tabs 22, 24, but of course are formed by the injection molding processes. The notches 28 serve as a frangible connection between the tabs 22, 24 and the body 40. A user can impart a force about the frangible connection and break it so as to remove tabs 22, 24 from the rod 40 that are not necessary to secure spacers 10. Although notch 28 is indicated at each tab 22, 24 in this example, a different number of notches 28 may be provided within the scope of this invention.

[0053] Each guide plate 30 includes a generally flat panel 33, a handle 34 extending from an outer surface of the panel 33, and a pyramid-shaped frangible interconnect 32 extending between an inner surface of the panel 33 and the end of the body 40. The apex of the frangible interconnect 32 is easily broken away from the body 40 without imparting any translational force to the body 40 and thus without disturbing the alignment of connected spacers 10.

[0054] As part of the guide plate 30 will extend past the edge of a connected glass block 500, the guide plate 30 must be at least partially removed when the connector 20 is used at the edge of the glass block wall, e.g. where the wall contacts the sill, jamb or header of a wall frame. In order for the guide plate 30 to serve its purpose of aligning blocks 500, it is desirable to not completely remove the guide plates 30 of connectors 20 used at the edge of the wall. Therefore, vertical and horizontal notches 36, 38 are provided in the surface of the guide plate 30 to make it easy to break off or cut a vertical or horizontal half of the guide plate 30 from the connector body. The notches 36, 38 are preferably formed by injection molding, but can also be formed by other techniques as known in the art. The vertical notch 36 allows one half of the panel 33 to be broken or cut such that the panel 33 does not interfere with the jamb of a wall frame, yet enabling the remainder of the panel 30 to be used to align the glass blocks 500 at the vertical edges of the glass block wall.

[0055] Similarly, the horizontal notch 38 allows one half of the panel 33 to be broken or cut such that the panel 33 does not interfere with the sill or header of the wall frame, yet enabling the remainder of the panel 33 to be used to align the glass blocks 500 at the horizontal edges of the glass block wall.

[0056] FIG. 11 shows the connector 20 and the spacer 10 connected by the horizontal tabs 22 into the slots 16 of the spacer 10. One pair of vertical tabs 24 have been broken off the connector 20 to provide a connector with a T-shaped configuration. As such, this connector 20 can be used along the bottommost horizontal course of a glass block wall and be laid flat along the floor, ground, or sill of a frame (in which case the bottom half of the guide plate 30 is also removed).

[0057] FIGS. 12 and 13 show three spacers 10 connected by spacer connectors 20 such three edge faces of a glass block 500 are covered by the spacers 10. One pair of horizontal tabs 22 and one pair of vertical tabs 24 have been broken off the connector 20 situated at the bottom right corner in the Figures, one pair of vertical tabs 24 have been broken off the connector 20 situated at the bottom left corner in the Figures, and no tabs have been broken off the connector (an “X” shaped configuration) situated at the top left corner in the Figures. This arrangement of spacers 10 and connectors 20 could be used to place a glass block 500 in the corner of a glass block wall (in which case the entire guide plate 30 of the bottom right connector 20 is removed during wall assembly), as the connector 20 in the bottom right corner can fit snugly in the corner, and as the connector 20 in the bottom left corner can fit flush against the ground, floor, or sill of a frame.
FIG. 14 illustrates a connector 20 where a pair of the horizontal tabs 22 have been removed. The connector 20, in this configuration, could be used adjacent to a window jamb (in which case the vertical half of the guide plate 30 is removed for wall assembly).

FIG. 15 illustrates a connector 20 where a pair of the vertical tabs 24 have been removed. The connector 20, in this configuration, could be fit against the head of a frame (in which case, the top horizontal half of the guide plate 30 is removed for wall assembly).

FIG. 16 illustrates a connector 20 where a pair of the vertical tabs 24 have been removed. The connector 20, in this “L-shaped” configuration, could be fit into a top corner of a frame (in which case the entire guide plate 30 is removed for wall assembly).

Construction of a glass block wall of the type illustrated in FIG. 1 within an existing window frame having a sill, two side jams and a header will now be described in accordance with the following steps 1 to 18:

Step 1. Use a pencil, tape measure and straight edge to measure, mark and draw a line around the entire opening to mark the centerline of the window

Step 2. Form a sill spacer assembly segment: Make an “L” shaped connector 20 for one corner of the window sill by snapping off one pair of horizontal and vertical tabs 22, 24 of the connector 20. Also remove both guide plates 30. Attach a spacer 10 to the horizontal (serrated) tab 22 of the connector 10. Create sill perimeter connectors 20 by snapping the vertical tabs 24 off the appropriate side and the bottom horizontal half of the guide plates 30 to create “T” shaped connectors 20. Attach one of the “T” shaped connectors 20 to the end of the attached spacer 10 and connect another spacer 10 to it. Continue to connect spacers 10 and “T” shaped connectors 20 until the number of spacers 10 equal the number of horizontal blocks 500 desired. Make a second “L” shaped corner connector 20 and attach it to the end of the last horizontal spacer 10 to form a completed sill segment. Dry fit the completed sill segment on the sill to ensure proper fit.

Step 3. Remove the completed sill segment from sill and turn over to expose underside. Open a tube of silicone sealant. Cut the tip at a 45° angle and large enough to allow a ¼" bead. Apply beads of silicone in the three channels 12 of the spacers 10.

Step 4. Mount sill spacer assembly segment to sill: Pick up the sill segment, rotate so the silicone is facing down and place in the framed opening. Firmly push down the segment from the top onto the sill until it is fully seated. Adjust the spacers 10 to center them with the previously marked centerline.

Step 5. Attach each spacer 10 of the constructed sill segment to the sill using 2-#8×1" screws, place a screw on either side of the center groove in the holes provided.

Step 6. Install the jamb spacer assembly segments: Apply beads of silicone in the three channels 12 of a spacer 10. With the silicone against the jamb, slide the spacer 10 onto the vertical tabs 24 of the corner sill connector 20 until seated and press firmly against the jamb. Repeat at opposite corner with another spacer 10. Line up the spacers 10 with the centerline and screw to jams using 2-#8×1" screws on either side of the center groove in the holes provided.

Step 7. Install first horizontal course of glass blocks: Gently place the first glass block 500 into the corner of the opening. Ensure that the block 500 is seated to both the horizontal and vertical spacers 10.

Step 8. Remove block 500 and apply silicone to the three channels on the topside of each attached spacer 10. Gently set the first glass block 500 down on silicone until seated. Place silicone in all three channels on one side of a loose spacer 10 and slide it on the vertical tabs 24 of the connector 20 next to the glass block 500, then press firmly against the block 500. Apply silicone to all three channels 12 on the other side of the same spacer 10 and install next glass block 500. Repeat this step until the first course of block 500 and vertical spacers 10 are completed. Prior to installing the last block 500 in the course, apply sealant to the three channels 12 of the vertical spacer 10 attached to the jamb, then slide the last block 500 into place from the top. Wipe up any excess sealant.

Step 9. Form an intermediate spacer assembly segment: Snap off one pair of horizontal tabs 22 and a vertical half of the lateral guide plates 30 to form a “T” shaped connector 20 and attach a spacer 10 to the remaining pair of horizontal tabs 22. On the opposite end of the spacer 10, attach an “X” shaped connector 20. Continue to connect spacers 10 and “X” connectors 20 until the number of spacers 10 equal the number of horizontal blocks 500 desired. At the end of the last spacer 10, attach another “T” connector 20, thereby completing an intermediate spacer segment.

Step 10. Apply beads of silicone sealant in the three channels 12 on the underside of the connected spacers 10. Lift the completed spacer segment over the previously placed glass block 500 course and line up the connector tabs 24 with the slots in the vertical spacers 10 below. Gently push the intermediate spacer segment down at the connectors 20 until each spacer 10 is firmly seated into place on a corresponding glass block 500. Check to ensure that glass blocks 500 are plumb. Attach vertical spacers 10 at jams as indicated in step 6. Wipe up any excess silicone sealant.

Step 11. Repeat steps 9 and 10 for each additional course until the second to last course of glass blocks 500 is installed. At this point, form the last intermediate spacer segment by connecting spacers 10 together using horizontal “T” connectors 20 with their top pair of vertical tabs 24 removed. Dry fit, then apply silicone and install over previous row of glass blocks 500.

Step 12. Form a jamb spacer assembly segment: Form an “L” shaped connector 20 by breaking off a pair of horizontal and vertical tabs 22, 24 and the guide plates 30. Attach two spacers 10 to the remaining tabs 22, 24 of the “L” shaped connector 20. Apply silicone to the two outer channels 12 of the spacers 10 and install the two spacers 10 and connector 20 to a corner of the header and one of the jams. Once in place, secure spacers 10 with screws.

Step 13. Apply silicone to the two outer channels 12 of the spacers 10 in step 12 and on the nearest spacer 10 in the last intermediate segment and carefully slide a glass block 500 into the corner. Wipe away excess silicone.

Step 14. Form “T” shaped connectors 10 by breaking off one pair of vertical tabs 24 and the upper half of the guide plate 30. Attach a spacer 10 to one pair of horizontal tabs 22 and another spacer 10 to the remaining vertical pair of tabs 24 of a “T” shaped connector 20. Silicone the two outer channels 12 of these spacers 10 and slide the unconnected horizontal tabs 22 into the header spacer 10 of Step 12. Screw
into place. Install glass block 500 with silicone as described above. Repeat this step until the second to last block 500 is installed.

Step 15. Prior to installing the last block 500, attach a spacer 10 to the vertical tabs 24 of an “L” shaped connector 20 formed in the same manner as the connector 20 in Step 12. Apply silicone to the outside channels 12 and slide the horizontal tabs 22 into the previously installed spacer 10. Then, apply silicone to the three channels 12 of the bottom and side spacers 10 and gently install the final glass block 500. Note that the last block 500 is installed without spacers 10 at the jamb and header locations. This block 500 will be secured with silicone and perimeter window trim.

Step 16. Apply silicone to fill the void at the header and jamb locations of the last block 500 installed. Repeat on the opposite side.

Step 17. Apply a generous head of silicone around the entire perimeter of both sides of the glass block window. Using a small plastic spoon or wet finger, tool the silicone leaving no voids.

Step 18. Wipe away any excess silicone sealant and allow sealant to cure for 24 hours prior to applying grout for finishing the window.

While the present invention has been described herein by the preferred embodiments, it will be understood by those skilled in the art that various changes may be made and added to the invention. The changes and alternatives are considered within the spirit and scope of the present invention.

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims priority to Canadian application entitled “Spacer Assembly for Glass Blocks,” filed Dec. 8, 2006, by Matthew Friesen, John Friesen, and Brad Friesen. The Canadian application is incorporated herein by reference.

What is claimed is:

1. A kit for facilitating the construction of a structure comprising a plurality of glass blocks, comprising:
a spacer configured for positioning between a first glass block and a second glass block;
a connector including:
a first connection tab configured for coupling to the spacer, such that the spacer is disposed in a first position when the spacer is coupled to the first connection tab; and
a second connection tab configured for coupling to the spacer, such that the spacer is disposed in a second position when the spacer is coupled to the second connection tab;
wherein at least one of the first and second connection tabs is frangibly connected to a respective remainder of the connector.

2. The kit as claimed in claim 1, wherein the frangible connection between each of the at least one of the first and second connection tabs and the respective remainder of the connector is defined by a notch.

3. The kit as claimed in claim 1, wherein the frangible connection between each of the at least one of the first and second connection tabs and the respective remainder of the connector is defined by a notch.

4. The kit as claimed in claim 1, wherein each of the first and second connection tabs is frangibly connected to a respective remainder of the connector.

5. The kit as claimed in claim 4, wherein each of the frangible connections between a respective one of each of the first and second connection tabs and the respective remainder of the connector is defined by a notch.

6. The kit as claimed in claim 4, wherein the frangible connection between a respective one of each of first and second connection tabs and the respective remainder of the connector is defined by a score line.

7. The kit as claimed in claim 1, wherein the first position is rotationally displaced by about 90 degrees relative to the second position.

8. The kit as claimed in claim 1, wherein each of the first and second connection tabs is also configured for coupling to a second identical spacer to effect joining of the spacer and the second identical spacer.

9. A kit as claimed in claim 1 further comprising a first channel having a first channel longitudinal axis, and a second channel having a second channel longitudinal axis, wherein each of the first and second channels is configured for receiving a binder to effect adhesion of the spacer to one of the first and second glass blocks.

10. A kit as claimed in claim 9 wherein the first channel is coupled to a second channel by each of a first rib and a second rib, wherein each of the first and second ribs includes a respective longitudinal rib axis which is transverse to the respective longitudinal channel axis of each of the first and second channels; such that the first rib is spaced apart from the second rib to define a bore extending through the spacer.

11. The kit as claimed in claim 10 wherein the spacer further includes a first side surface and a second side surface which is opposite to the first side surface, and wherein the first side surface is configured to become disposed opposite the first glass block and the second side surface is configured to become disposed opposite the second glass block when the spacer is positioned between the first and second glass blocks, such that the bore extends from the first side surface to the second side surface.

12. The kit as claimed in claim 10 wherein the first rib is connected to the second rib by a transverse rib, such that the transverse rib traverses the bore.

13. A kit for facilitating the construction of a structure comprising a plurality of glass blocks, comprising:
a spacer configured for positioning between a first glass block and a second glass block;
a connector including:
a connection tab for coupling to the spacer; and:
a guide plate including a guide surface configured for contiguous disposition with a respective surface of each of the first glass block and the second glass block when the spacer is coupled to the connection tab and is disposed between the first glass block and the second glass block, wherein a portion of the guide surface is defined by the frangible tab which is frangibly connected to a remainder of the guide plate.

14. The kit as claimed in claim 13 wherein the frangible connection between the frangible tab and the remainder of the guide plate is defined by a notch.

15. The kit as claimed in claim 13 wherein the frangible connection between the frangible tab and the remainder of the guide plate is defined by a score line.
16. The kit as claimed in claim 13, wherein the guide plate further includes a vane element configured for gripping by a user to effect breaking of the fragmentable connection.

17. The kit as claimed in claim 13, wherein the connection tabs is configured for coupling to a second identical spacer to effect joining of the spacer and the second identical spacer.

18. A kit as claimed in claim 13 further comprising a first channel having a first channel longitudinal axis, and a second channel having a second channel longitudinal axis, wherein each of the first and second channels is configured for receiving a binder to effect adhesion of the spacer to one of the first and second glass blocks.

19. A kit as claimed in claim 18 wherein the first channel is coupled to a second channel by each of a first rib and a second rib, wherein each of the first and second ribs includes a respective longitudinal rib axis which is transverse to the respective longitudinal channel axis of each of the first and second channels; such that the first rib is spaced apart from the second rib to define a bore extending through the spacer.

20. The kit as claimed in claim 19, wherein the spacer further includes a first side surface and a second side surface which is opposite to the first side surface, and wherein the first side surface is configured to become disposed opposite the first glass block and the second side surface is configured to become disposed opposite the second glass block when the spacer is positioned between the first and second glass blocks, such that the bore extends from the first side surface to the second side surface.

21. The kit as claimed in claim 19, wherein the first rib is connected to the second rib by a transverse rib, such that the transverse rib traverses the bore.