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Denton**

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(54) **SECURITY MESH INSERT FOR DOOR**
(71) Applicant: **Douglas A. Denton**, Sacramento, CA (US)
(72) Inventor: **Douglas A. Denton**, Sacramento, CA (US)
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(52) **U.S. Cl.**
CPC **E06B 9/52** (2013.01); **E05C 19/003** (2013.01)

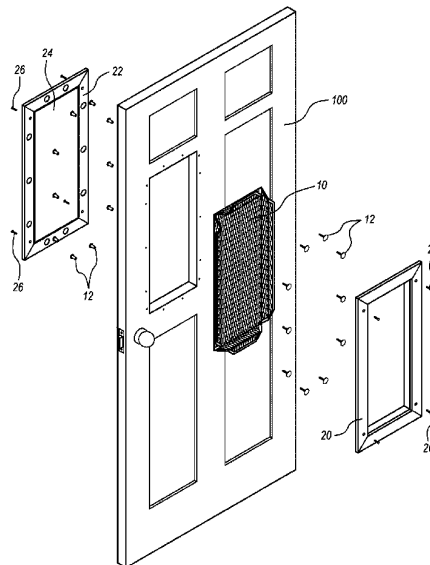
Primary Examiner — Daniel P Cahn
Assistant Examiner — John W Hanes, Jr.
(74) *Attorney, Agent, or Firm* — Craig A. Simmermon

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E06B 7/30; E06B 7/32; E06B 9/01; E06B
2009/005; E06B 2009/015; E05C 19/003
See application file for complete search history.

(57) **ABSTRACT**
A high strength mesh insert that can be installed into any type of door such as solid doors, hollow doors, interior doors, and exterior doors. The insert includes: a nine panel mesh insert, an exterior trim assembly, an interior trim assembly, an internal door hatch, and a plurality of fasteners. The shape of the nine panel mesh insert provides superior strength to the insert wherein a properly installed insert can withstand several hard blows from a sledge hammer without breaking or breaching. The insert provides high strength security but also allows for air ventilation and sound transfer between the interior and exterior sides of the door when the internal hatch door is open. The internal hatch door may also be closed to prevent air ventilation and sound transfer.

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2 Claims, 5 Drawing Sheets



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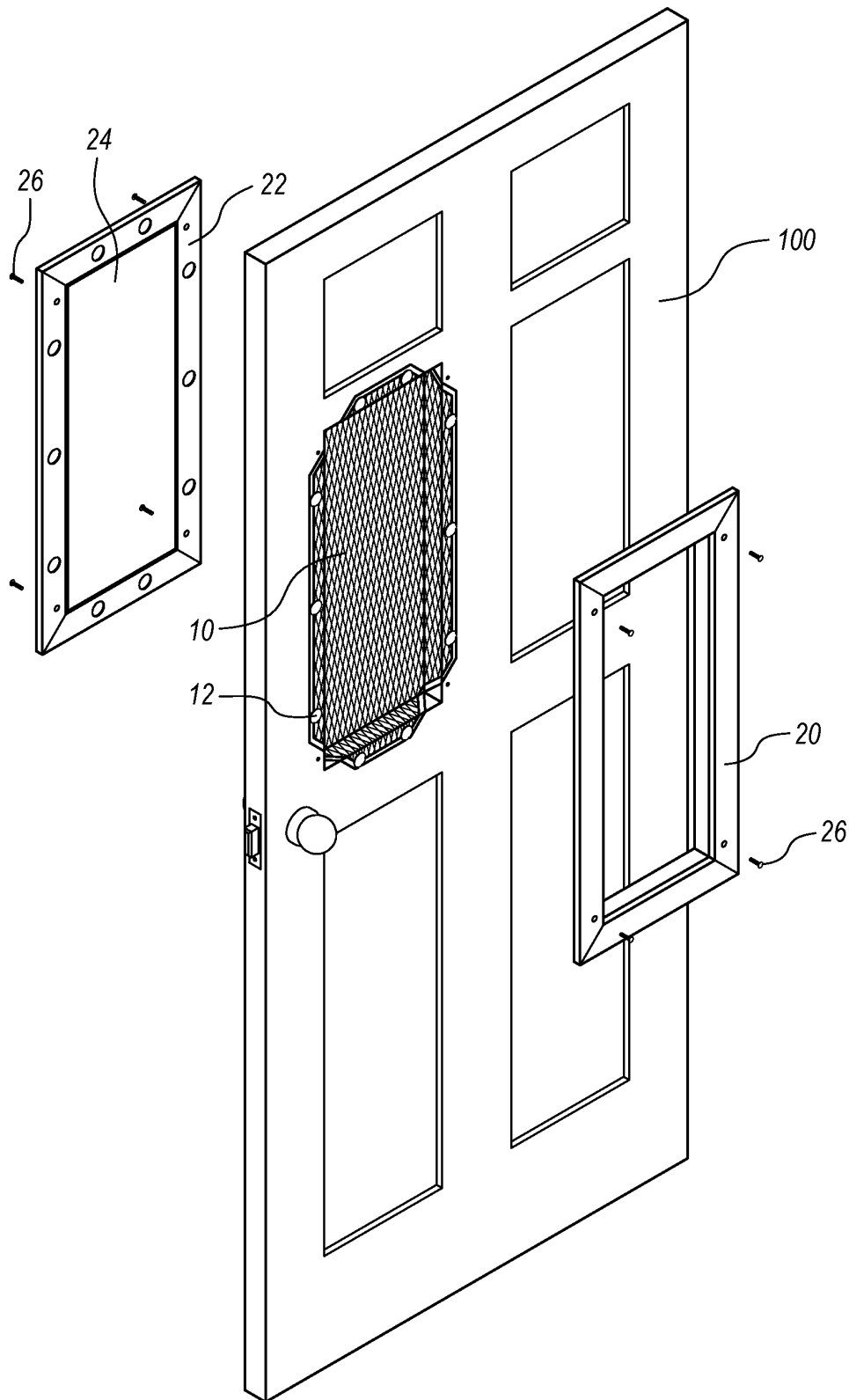


FIG. 2

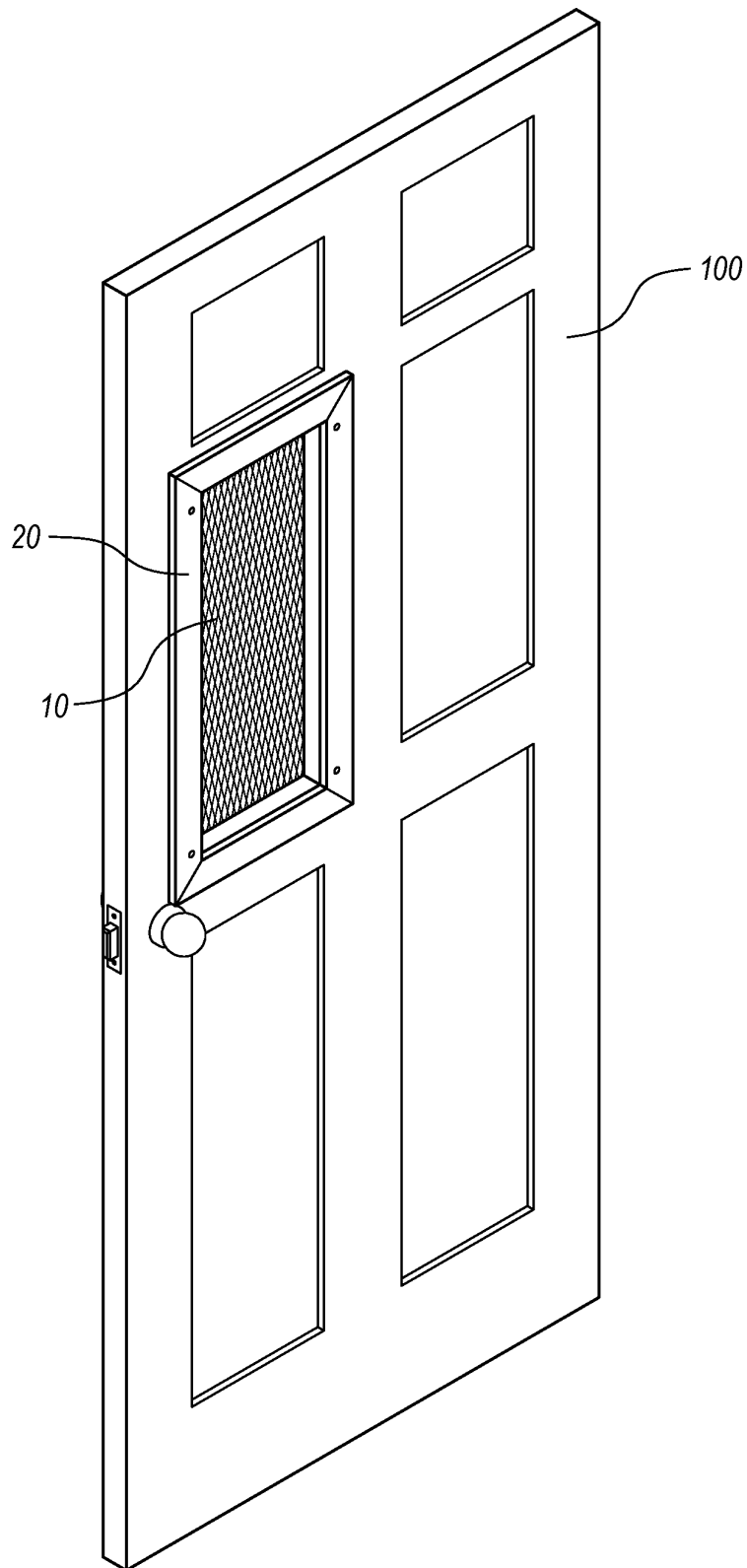


FIG. 3

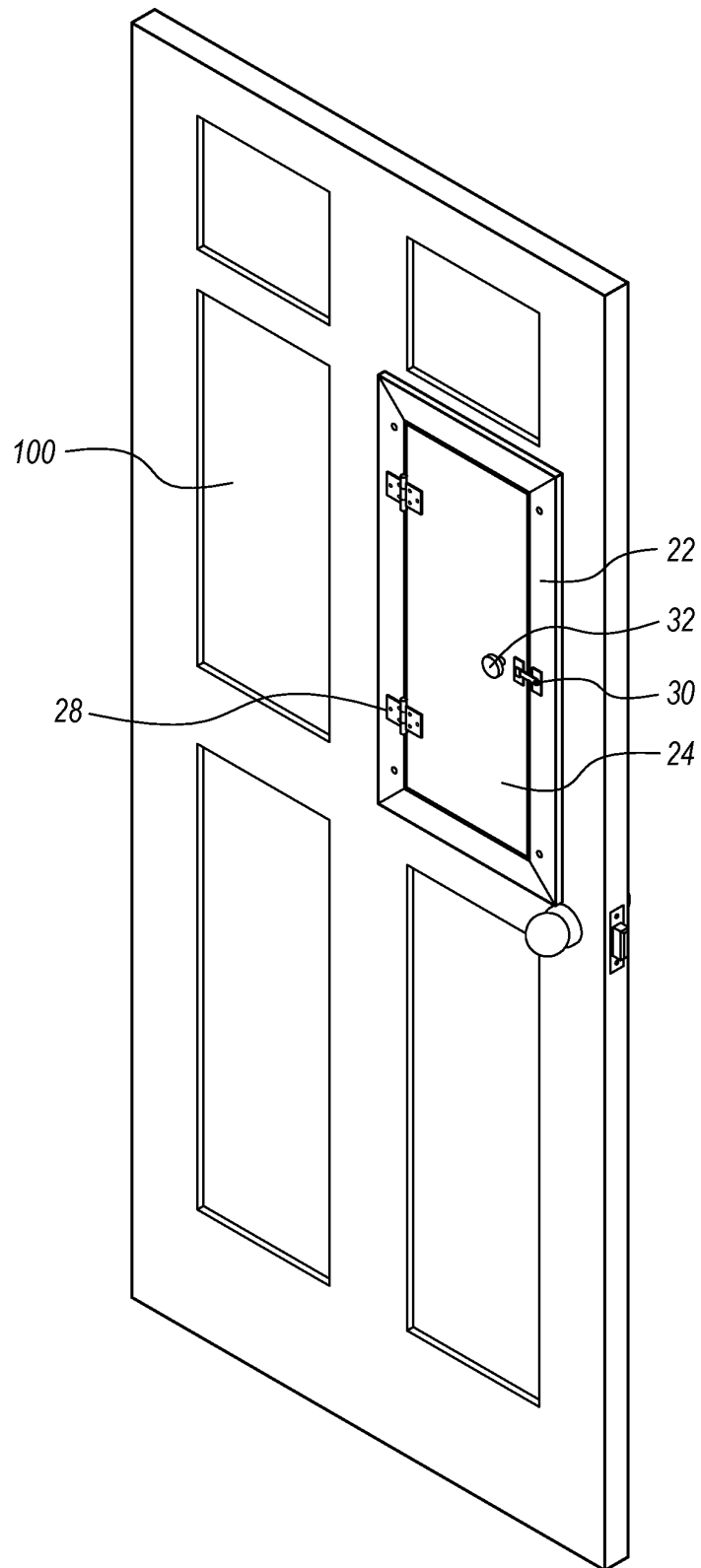


FIG. 4

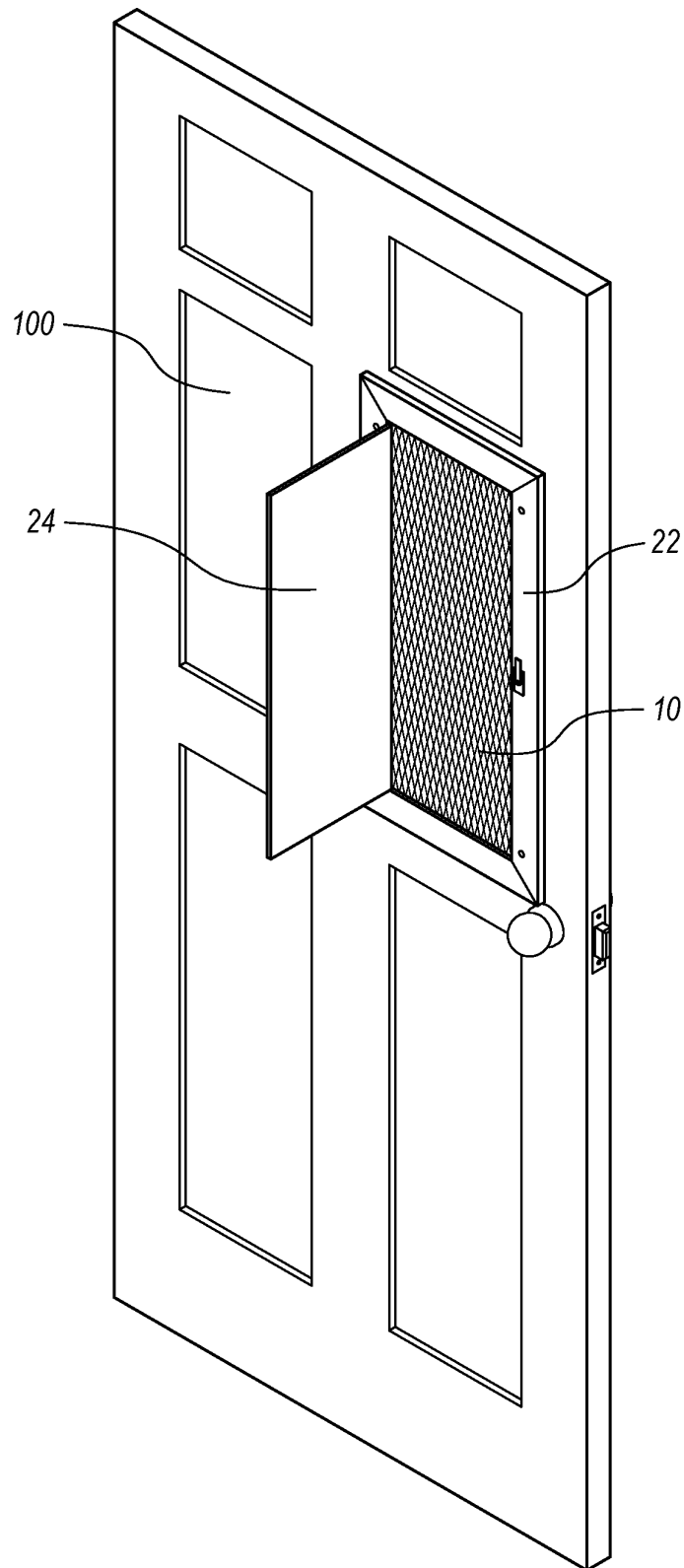


FIG. 5

SECURITY MESH INSERT FOR DOOR

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to security mesh insert for a door and more particularly to a high strength mesh insert that can be installed into any door. The high strength mesh insert prevents people or animals from getting through the mesh insert or the door because of its unique design and high strength material while still allowing for sound transfer and air ventilation through the vent in the door.

2. Description of Related Art

There are other security inserts for doors in the prior art, however, there are none with the specific design and aspects as shown and described below. Security mesh insert for door includes a special high strength nine panel insert that has been tested to withstand multiple hard blows from a sledge hammer without breach or breaking when properly installed into a door.

BRIEF SUMMARY OF THE INVENTION

It is an aspect of security mesh insert to be installed into any door solid or hollow.

It is an aspect of security mesh insert to withstand several hard blows from a sledge hammer without failing or breaching.

It is an aspect of security mesh insert to include a high strength nine panel mesh insert.

It is an aspect of high strength nine panel mesh insert to be installed into a rectangular or square hole cut into any door.

It is an aspect of security mesh insert to include and interior hatch door that may be opened or locked closed.

When interior hatch door is open, air may freely circulate between the interior and exterior of the door.

When interior hatch door is open, sound may freely travel between the interior and exterior of the door.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective assembly view of security mesh insert and a door.

FIG. 2 is a perspective assembly view of security mesh insert and a door with the nine panel mesh insert installed in or fastened to the door.

FIG. 3 is a perspective view of security mesh insert installed into a door, viewed from the exterior side of the door.

FIG. 4 is a perspective view of security mesh insert installed into a door, viewed from the interior side of the door, with the interior hatch door closed.

FIG. 5 is a perspective view of security mesh insert installed into a door, viewed from the interior side of the door, with the interior hatch door open.

-continued

DEFINITION LIST

| Term | Definition |
|------|------------------------|
| 20 | Exterior Trim Assembly |
| 22 | Interior Trim Assembly |
| 24 | Interior Hatch Door |
| 26 | Trim Fastener |
| 28 | Hinge |
| 30 | Latch |
| 32 | Knob |
| 100 | Door |

DETAILED DESCRIPTION OF THE INVENTION

Security mesh insert for door comprises: a nine panel mesh insert **10**; a plurality of nine panel mesh insert fasteners **12**; an exterior trim assembly **20**; an interior trim assembly **22**; and a plurality of trim fasteners **26**. Security mesh insert for door can be installed into any type of door **100**, including solid doors, hollow doors, interior doors, and exterior doors.

Nine panel mesh insert **10** is a rigid structure made of nine rigid panel members. All nine rigid panel members are a rigid sheet or panel of meshed or apertured material. As detailed below, all nine rigid members are attached or connected together to form one nine-paneled rigid structure.

In best mode, all nine panels are made from one piece or one sheet of rigid meshed or apertured material where the panels are formed by bending or braking the sheet of rigid meshed or apertured material into the specific nine-paneled structure shown and described. Nine panel mesh insert **10** is essential to the high-strength aspect of this invention wherein the specific design of the nine panel mesh insert **10** and it is installed into a door **100** imparts the high-strength and durability aspects into the invention.

Nine panel mesh insert **10** comprises: a face panel; a first rim panel; a second rim panel; a third rim panel; a fourth rim panel; a first exterior flange panel; a second exterior flange panel; a third exterior flange panel; and a fourth exterior flange panel. Nine panel mesh insert **10** may be made of any known material such as: metal, steel, aluminum, polymer, plastic, composite, wood, fiberglass, ceramic, carbon fiber, or any other known material.

Face panel is a rigid rectangular or square shaped planar member with a plurality of holes or apertures therein. Face panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Face panel is the largest panel of the nine panel insert **10**, as depicted. Face panel is a vertical member, as depicted. Face panel has a width, length, a thickness, first edge, a second edge, a third edge, and a fourth edge. The first edge of face panel is the upper horizontal edge of face panel or the edge of face panel that is closest to the ceiling of room. The second edge of face panel is the right vertical edge of face panel as viewed from the exterior side of the door **100**. The third edge of face panel is the lower horizontal edge of face panel or the edge of face panel that is closest to the floor of the room. The fourth edge of face panel is the left vertical edge of face panel as viewed from the exterior side of door **100**.

First rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. First rim panel

DEFINITION LIST

| Term | Definition |
|------|---------------------------------|
| 10 | Nine Panel Mesh Insert |
| 12 | Nine Panel Mesh Insert Fastener |

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is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, perforations, vents, or similar to form a meshed material or apertured material. First rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The first edge of first rim panel is the longest edge of the trapezoid. The first edge of first rim panel is a horizontal member, as depicted. The first edge of first rim panel is rigidly attached to the first edge of face panel so that the plane of first rim panel is perpendicular to the plane of face panel. Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, face panel and first rim panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Second rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Second rim panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Second rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The first edge of second rim panel is the longest edge of the trapezoid. The first edge of second rim panel is a vertical member, as depicted. The first edge of second rim panel is rigidly attached to the second edge of face panel so that the plane of second rim panel is perpendicular to the plane of face panel. Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, face panel and second rim panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Third rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Third rim panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Third rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The first edge of third rim panel is the longest edge of the trapezoid. The first edge of third rim panel is a horizontal member, as depicted. The first edge of third rim panel is rigidly attached to the third edge of face panel so that the plane of third rim panel is perpendicular to the plane of face panel. Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, face panel and third rim panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Fourth rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Fourth rim panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Fourth rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The first edge of fourth rim panel is the longest edge of the trapezoid. The first edge of fourth rim panel is a vertical member, as depicted. The first edge of fourth rim

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panel is rigidly attached to the fourth edge of face panel so that the plane of fourth rim panel is perpendicular to the plane of face panel. Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, face panel and fourth rim panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

First exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. First exterior flange panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. First exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The third edge of first exterior flange panel is the longest edge of the trapezoid. The third edge of first exterior flange panel is a horizontal member, as depicted. The third edge of first exterior flange panel is rigidly attached to the third edge of first rim panel so that the plane of first exterior flange panel is perpendicular to the plane of first rim panel and parallel with the plane of the face panel without overlapping with face panel, wherein the first exterior flange panel bends away from the face panel, as depicted.

Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, first rim panel and first exterior flange panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Second exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Second exterior flange panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Second exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The third edge of second exterior flange panel is the longest edge of the trapezoid. The third edge of first exterior flange panel is a vertical member, as depicted. The third edge of second exterior flange panel is rigidly attached to the third edge of second rim panel so that the plane of second exterior flange panel is perpendicular to the plane of second rim panel and parallel with the plane of face panel without overlapping with face panel, wherein the first exterior flange panel bends away from the face panel, as depicted.

Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, second rim panel and second exterior flange panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Third exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Third exterior flange panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Third exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third

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edge, and a fourth edge. The third edge of third exterior flange panel is the longest edge of the trapezoid. The third edge of third exterior flange panel is a horizontal member, as depicted. The third edge of third exterior flange panel is rigidly attached to the third edge of third rim panel so that the plane of third exterior flange panel is perpendicular to the plane of third rim panel and parallel with the plane of face panel without overlapping with face panel, wherein the first exterior flange panel bends away from the face panel, as depicted.

Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, third rim panel and third exterior flange panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

Fourth exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein. Fourth exterior flange panel is made of rigid meshed material or apertured material that is a strong rigid sheet of material with a plurality of holes, gaps, openings, slits, slots, perforations, vents, or similar to form a meshed material or apertured material. Fourth exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge. The third edge of fourth exterior flange panel is the longest edge of the trapezoid. The third edge of fourth exterior flange panel is a vertical member, as depicted. The third edge of fourth exterior flange panel is rigidly attached to the third edge of fourth rim panel so that the plane of fourth exterior flange panel is perpendicular to the plane of fourth rim panel and parallel with the plane of face panel without overlapping with face panel, wherein the first exterior flange panel bends away from the face panel, as depicted.

Rigid attachment may be accomplished by any known means such as: brake bending, pressed seam, weld, solder, glue, epoxy, adhesive, bolts, screws, rivets, clips, snaps, pins, or fasteners. In best mode, fourth rim panel and fourth exterior flange panel are made from the same sheet of material and the two panel are made by bending a single piece of material into the two panels.

In best mode, the entire nine panel mesh insert **10** is made from a single rectangular or square sheet of material wherein first all four corners of the sheet of material are cut off diagonally at a 45-degree angle. Then a rim panel and a flange panel are formed out of each of the remaining four tabs left over from the corner cut. This method produces the nine panel mesh insert **10** described above with one square or rectangular face panel, four trapezoidal rim panels, and four trapezoidal exterior flange panels. This design creates a mesh insert with superior strength and durability.

Each of the plurality of nine panel mesh insert fasteners **12** is a fastener, such as, a screw, bolt, nut, washer, rivet, anchor, nail, pin, clip, snap, or any other type of known fastener. To install nine panel mesh insert **10**, each of the plurality of nine panel mesh insert fasteners **12** is inserted through a hole or aperture in the nine panel mesh insert **10** and secured to the door **100** in this way. This installation method insures maximum strength to the design. The essence of this invention is not the type of fastener used. Any known fastener may be used. In best mode, elevator bolts with a male and female end are used because elevator bolts are very strong and have flat heads that may be concealed easily by the interior and exterior trim assemblies **20, 22**.

Exterior trim assembly **20** is a square or rectangular frame assembly that is the exterior trim for the nine panel mesh

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insert **10**. Exterior trim assembly **20** is a decorative molding, framing, or casing around the nine panel mesh insert **10** that is used to cover the four exterior flanges of the nine panel mesh insert **10** and the nine panel mesh insert fasteners **12**. Exterior trim assembly **10** may be made of any known material such as: metal, steel, aluminum, polymer, plastic, composite, wood, fiberglass, ceramic, carbon fiber, or any other known material. Exterior trim assembly comprises: a first trim piece with a first and second end, a second trim piece with a first and second end, a third trim piece with a first and second end, and a fourth trim piece with a first and second end. Each trim piece is a board or a long, thin, flat piece of wood or other hard material. Optionally, each trim piece may be an angular member or biplanar member with an L-shaped cross section, wherein first, second, third, and fourth pieces of trim are each lengths of angle material with an L-shaped cross section. This mode is depicted in FIGS. 1-3. With this mode, the angular trim pieces cover the first, second, third, and fourth rim panels of nine panel mesh insert **10** when installed, whereas the prior mode of planar exterior trim pieces leave the first, second, third, and fourth rim panels of nine panel mesh insert **10** exposed. This option is preferred because it add more strength to the design.

First trim piece is the upper horizontal member of exterior trim assembly **20** that is closest to the ceiling of room. Second trim piece is the right vertical member of exterior trim assembly **20** as viewed from the exterior side of the door **100**. The third trim piece is the lower horizontal member of exterior trim assembly **20** that is closest to the floor of the room. The fourth trim piece is the left vertical edge of exterior trim assembly **20** as viewed from the exterior side of door **100**. The first end of first trim piece is connected to the first end of fourth trim piece so that first and fourth trim pieces form a right angle. The second end of first trim piece is connected to the first end of second trim piece so that the first and second trim pieces form a right angle. The second end of second trim piece is connected to the first end of the third trim piece so that the second and third trim pieces form a right angle. The second end of third trim piece is connected to the second end of fourth trim piece so that the third and fourth trim pieces form a right angle.

Interior trim assembly **22** is a square or rectangular frame assembly that is the interior trim for the nine panel mesh insert **10**. Interior trim assembly **22** is a decorative molding, framing, or casing around the nine panel mesh insert that is used to cover the interior edges of the nine panel mesh insert **10** and the nine panel mesh insert fasteners **12**. Interior trim assembly **22** may be made of any known material such as: metal, steel, aluminum, polymer, plastic, composite, wood, fiberglass, ceramic, carbon fiber, or any other known material. Interior trim assembly comprises: a first trim piece with a first and second end, a second trim piece with a first and second end, a third trim piece with a first and second end, and a fourth trim piece with a first and second end. Each trim piece is a board or a long, thin, flat piece of wood or other hard material.

First trim piece is the upper horizontal member of interior trim assembly that is closest to the ceiling of room. Second trim piece is the right vertical member of interior trim assembly **22** as viewed from the interior side of the door **100**. The third trim piece is the lower horizontal member of interior trim assembly **22** that is closest to the floor of the room. The fourth trim piece is the left vertical edge of interior trim assembly **22** as viewed from the exterior side of door **100**. The first end of first trim piece is connected to the first end of fourth trim piece so that first and fourth trim pieces form a right angle. The second end of first trim piece

is connected to the first end of second trim piece so that the first and second trim pieces form a right angle. The second end of second trim piece is connected to the first end of the third trim piece so that the second and third trim pieces form a right angle. The second end of third trim piece is connected to the second end of fourth trim piece so that the third and fourth trim pieces form a right angle.

Security mesh insert for door comprises may further comprise an interior hatch door 24. Interior hatch door 24 is a rigid square or rectangular member with a width, a length, a thickness, an interior surface, and an exterior surface. The length and width of interior hatch door 24 are similar to that of face panel of nine panel mesh insert 10. Interior hatch door 24 is a door or hatch. Interior hatch door 24 may be made of any known material such as: metal, steel, aluminum, polymer, plastic, composite, wood, fiberglass, ceramic, carbon fiber, or any other known material. Interior hatch door 24 functions swings open and close. In the closed position, interior hatch door 24 completely covers the face panel to prevent anyone on the exterior side of the door 100 from seeing through the door 100 or viewing the interior of the room. In the closed position, interior hatch door 24 also helps prevent sound from transferring from inside the room to the exterior of the room and vice versa. In the open position, interior hatch door 24 does not cover the face panel so that sound may freely transfer through the nine panel mesh insert 10 and also air may circulate and freely transfer through the nine panel mesh insert 10.

Each of the plurality of trim fasteners 26 is a fastener, such as, a screw, bolt, nut, washer, rivet, anchor, nail, pin, clip, snap, or any other type of known fastener. The essence of this invention is not the type of fastener used. Any known fastener may be used. In best mode, wood screws are used to fasten the exterior trim assembly 20 and the interior trim assembly 32 to the door 100.

Interior hatch door 24 further comprises one or more hinges 28. Interior hatch door 24 is pivotally attached to the interior trim assembly by one or more hinges 28, wherein a first portion of hinge 28 is rigidly attached to the interior surface of the interior hatch door 24 and a second portion of hinge 28 is rigidly attached to the interior trim assembly 22. Each hinge 28 is a bearing joint or mechanism that provides a pivotal connection between the interior hatch door 24 and the interior trim assembly 22. Each hinge 28 is a hinge in the common of the word and the common definition of the word.

Interior hatch door 24 further comprises a latch 30. Latch 30 is rod, bar, catch, or mechanism that fastens or locks the interior hatch door 24 closed and prevents the interior hatch door 24 from being pushed open from the exterior side of the door 100. Any known type of latch or door latch may be used for latch 30. Latch 30 is slidably attached to the interior surface of the interior hatch door 24 using one or more trim fasteners 26.

Optionally, interior hatch door 24 may further comprise a knob 32. Knob 32 is a handle or ball that is used to grasp onto by the user in order to open or close the interior hatch door 24. Knob 32 is rigidly attached to the interior surface of interior hatch door 24 using one or more trim fasteners 26.

Security mesh insert for door may be installed into any door 100, including solid doors or hollow doors. Security mesh insert for door is installed into a door 100 as follows. First a rectangular or square hole is cut into the door 100. The length and width of the rectangular or square hole in the door 100 should be equivalent to or slightly larger than the length and width of face panel of nine panel mesh insert 10. Then the nine pane mesh insert 10 is aligned with the rectangular or square hole in the door 100 and the nine pane

mesh insert 10 is press fit into the rectangular or square hole in the door 100 or otherwise inserted and installed into the rectangular or square hole in the door 100. Special care must be taken to cut the exact size rectangular or square hole in the door 100 to allow for the proper press fit between the nine pane mesh insert 10 and the rectangular or square hole in the door 100. Next, the nine pane mesh insert 10 is secured to the door 100 using a plurality of nine panel mesh insert fasteners 12 by inserting each nine panel mesh insert fastener 12 through an aperture or hole in the first flange panel, the second flange panel, the third flange panel, and the fourth flange panel. In best mode, nine panel mesh insert fasteners 12 are spaced out at about 3-10 inches part. In best mode pilot holes are first drilled into the door 100 prior to installing the nine panel mesh insert fasteners 12. Nine panel mesh insert fasteners 12 are installed around the full perimeter of the nine pane mesh insert 10 as depicted. To insure proper strength, nine panel mesh insert fasteners 12 should be spaced at 8 inches or less. Next, the exterior trim assembly 20 is aligned with the installed nine pane mesh insert 10 on the exterior side of the door 100 and the exterior trim assembly 20 attached to the exterior side of the door 100 using a plurality of trim fasteners 26. In best mode pilot holes are first drilled into the door 100 and the exterior trim assembly 20 prior to installing trim fasteners 26. Next, the interior trim assembly 22 is aligned with the installed nine pane mesh insert 10 on the interior side of the door 100 and the interior trim assembly 22 attached to the interior side of the door 100 using a plurality of trim fasteners 26. In best mode pilot holes are first drilled into the door 100 and the interior trim assembly 22 prior to installing trim fasteners 26. Next, the interior hatch door 24 is installed by pivotally attaching the interior hatch door 24 to the exterior trim assembly 24. The interior hatch door 24 is usually attached to the fourth trim piece of exterior trim assembly 20 using one or more trim fasteners 26. Finally, the latch 30 is installed by slidably attaching latch 30 onto the exterior surface of interior hatch door 24 so that latch 30 may be slid to lock interior hatch door 24 and slid to unlock interior hatch door 24. A guide portion of latch 30 may also need to be rigidly attached to the exterior surface of the interior trim assembly 22.

As stated, when properly installed, security mesh insert for door has been extensively tested to withstand multiple hard blows from a sledge hammer without breach or breaking. People on the interior side of security mesh insert for door may rest easy knowing that their door is virtually impenetrable because of security mesh insert for door while still allowing for and benefitting from air flow and sound travel between security mesh insert for door.

What is claimed is:

1. A security mesh insert for a door comprising: a nine panel mesh insert; a plurality of nine panel mesh insert fasteners; an exterior trim assembly; an interior trim assembly; and a plurality of trim fasteners, wherein,
 - a) said nine panel mesh insert comprises: a face panel; a first rim panel; a second rim panel; a third rim panel; a fourth rim panel; a first exterior flange panel; a second exterior flange panel; a third exterior flange panel; and a fourth exterior flange panel, wherein,
 - b) said face panel is a rigid rectangular or square shaped planar member with a plurality of holes or apertures therein,
 - c) said face panel has a width, length, a thickness, first edge, a second edge, a third edge, and a fourth edge,
 - d) said first rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein,

said first rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge,

said second rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein, 5

said second rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge,

said third rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein, 10

said third rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge,

said fourth rim panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein, 15

said fourth rim panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge,

said first exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein, 20

said first exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge,

said second exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein, 25

said second exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge, 30

said third exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein,

said third exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge, 35

said fourth exterior flange panel is a rigid trapezoid shaped planar member with a plurality of holes or apertures therein,

said fourth exterior flange panel has a width, overall length, a thickness, a first edge, a second edge, a third edge, and a fourth edge, 40

said first edge of said first rim panel is rigidly attached to said first edge of said face panel so that said first rim panel is perpendicular to said face panel, 45

said first edge of said second rim panel is rigidly attached to said second edge of said face panel so that said second rim panel is perpendicular to said face panel,

said first edge of said third rim panel is rigidly attached to said third edge of said face panel so that said third rim panel is perpendicular to said face panel, 50

said first edge of said fourth rim panel is rigidly attached to said fourth edge of said face panel so that said fourth rim panel is perpendicular to said face panel,

said third edge of said first exterior flange panel is rigidly attached to 55

said third edge of said first rim panel so that said first exterior flange panel is: perpendicular to said first rim panel, parallel to said face panel, but does not overlap with said face panel, and bends away from said face panel, 60

said third edge of said second exterior flange panel is rigidly attached to said third edge of said second rim panel so that said second exterior flange panel is: perpendicular to said second rim panel, parallel to said face panel, but does not overlap with said face panel, and bends away from said face panel, 65

said third edge of said third exterior flange panel is rigidly attached to said third edge of said third rim panel so that said third exterior flange panel is: perpendicular to said third rim panel, parallel to said face panel, but does not overlap with said face panel, and bends away from said face panel,

said third edge of said fourth exterior flange panel is rigidly attached to said third edge of said fourth rim panel so that said fourth exterior flange panel is: perpendicular to said fourth rim panel, parallel to said face panel, but does not overlap with said face panel, and bends away from said face panel,

each of said plurality of nine panel mesh insert fasteners is a fastener, screw, bolt, nut, washer, rivet, anchor, nail, pin, clip, or snap,

said plurality of nine panel mesh insert fasteners is used to rigidly attach said nine panel mesh insert to a door,

said exterior trim assembly is a square or rectangular frame assembly,

said exterior trim assembly comprises: a first trim piece with a first and second end, a second trim piece with a first and second end, a third trim piece with a first and second end, and a fourth trim piece with a first and second end, wherein,

said first end of said first trim piece of said exterior trim assembly is connected to said first end of said fourth trim piece of said exterior trim assembly so that said first and fourth trim pieces said exterior trim assembly form a right angle,

said second end of said first trim piece of said exterior trim assembly is connected to said first end of said second trim piece of said exterior trim assembly so that said first and second trim pieces said exterior trim assembly form a right angle,

said second end of said second trim piece of said exterior trim assembly is connected to said first end of said third trim piece of said exterior trim assembly so that said second and third trim pieces said exterior trim assembly form a right angle,

said second end of said third trim piece of said exterior trim assembly is connected to said second end of said fourth trim piece of said exterior trim assembly so that said third and fourth trim pieces said exterior trim assembly form a right angle,

said interior trim assembly is a square or rectangular frame assembly,

said interior trim assembly comprises: a first trim piece with a first and second end, a second trim piece with a first and second end, a third trim piece with a first and second end, and a fourth trim piece with a first and second end, wherein,

said first end of said first trim piece of said interior trim assembly is connected to said first end of said fourth trim piece of said interior trim assembly so that said first and fourth trim pieces of said interior trim assembly form a right angle,

said second end of said first trim piece of said interior trim assembly is connected to said first end of said second trim piece of said interior trim assembly so that said first and second trim pieces of said interior trim assembly form a right angle,

said second end of said second trim piece of said interior trim assembly is connected to said first end of said third trim piece of said interior trim assembly so that said second and third trim pieces of said interior trim assembly form a right angle,

said second end of said third trim piece of said interior trim assembly is connected to said second end of said fourth trim piece of said interior trim assembly so that said third and fourth trim pieces of said interior trim assembly form a right angle, 5
 each of said plurality of trim fasteners is a fastener, screw, bolt, nut, washer, rivet, anchor, nail, pin, clip, or snap, and
 said plurality of trim fasteners is used to rigidly attach said exterior trim assembly and said interior trim assembly 10 to said door.

2. A security mesh insert for a door as recited in claim 1 further comprising: an interior hatch door; one or more hinges, and a latch, wherein,
 said interior hatch door is a rigid square or rectangular 15 member with a width, a length, a thickness, an interior surface, and an exterior surface,
 said one or more hinges is a bearing joint or mechanism that provides a pivotal connection,
 said one or more hinges has a first portion and a second 20 portion,
 said first portion of said one or more hinges is rigidly attached to said interior surface of said interior hatch door and said second portion of said one or more hinges is rigidly attached to said interior trim assembly, 25
 said latch is a rod, bar, catch, or mechanism that fastens or locks said interior hatch door shut, and
 said latch is slidably attached to said interior surface of said interior hatch door.

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