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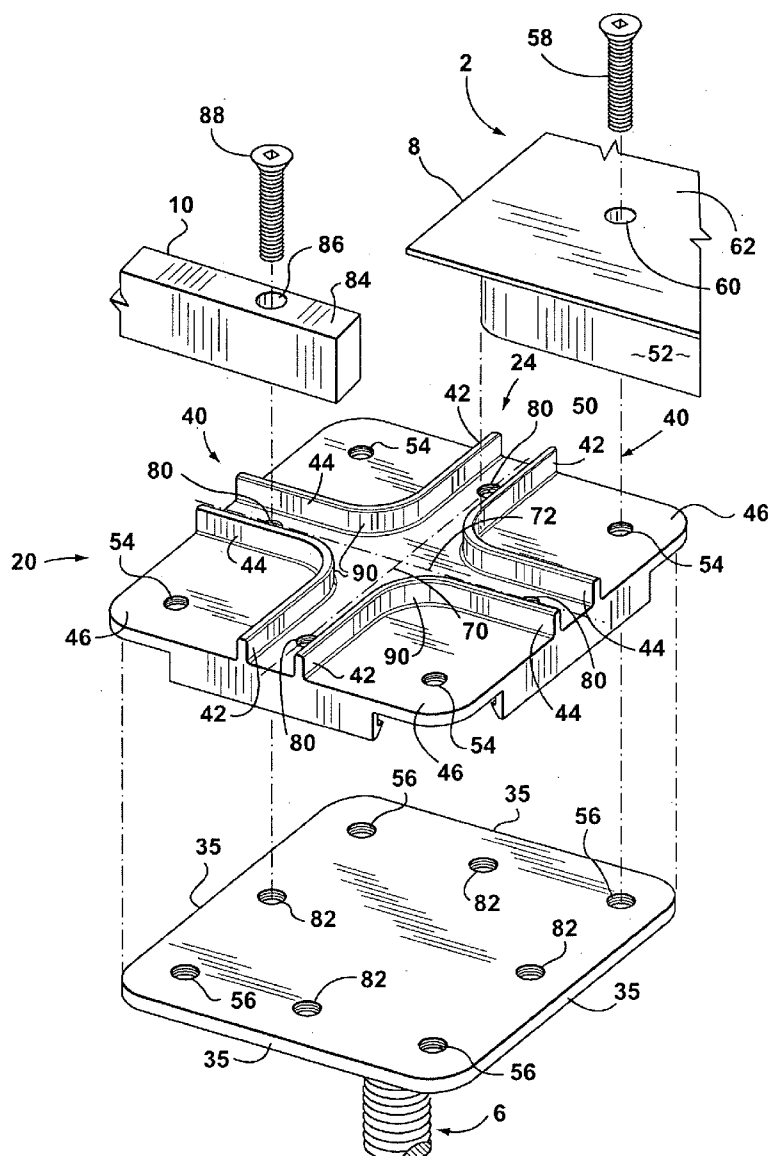
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(76) **Inventor: Bruce Mead, Mississauga (CA)****Publication Classification**(51) **Int. Cl.⁷** **E04G 1/22**(52) **U.S. Cl.** **52/126.7**

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A cap for a pedestal adapted to support adjacent floor panels defining a raised floor said cap comprising a bottom surface for contacting said pedestal, said bottom surface including means to capture the pedestal; and a top surface presenting a plurality of ribs for locating said floor panels.



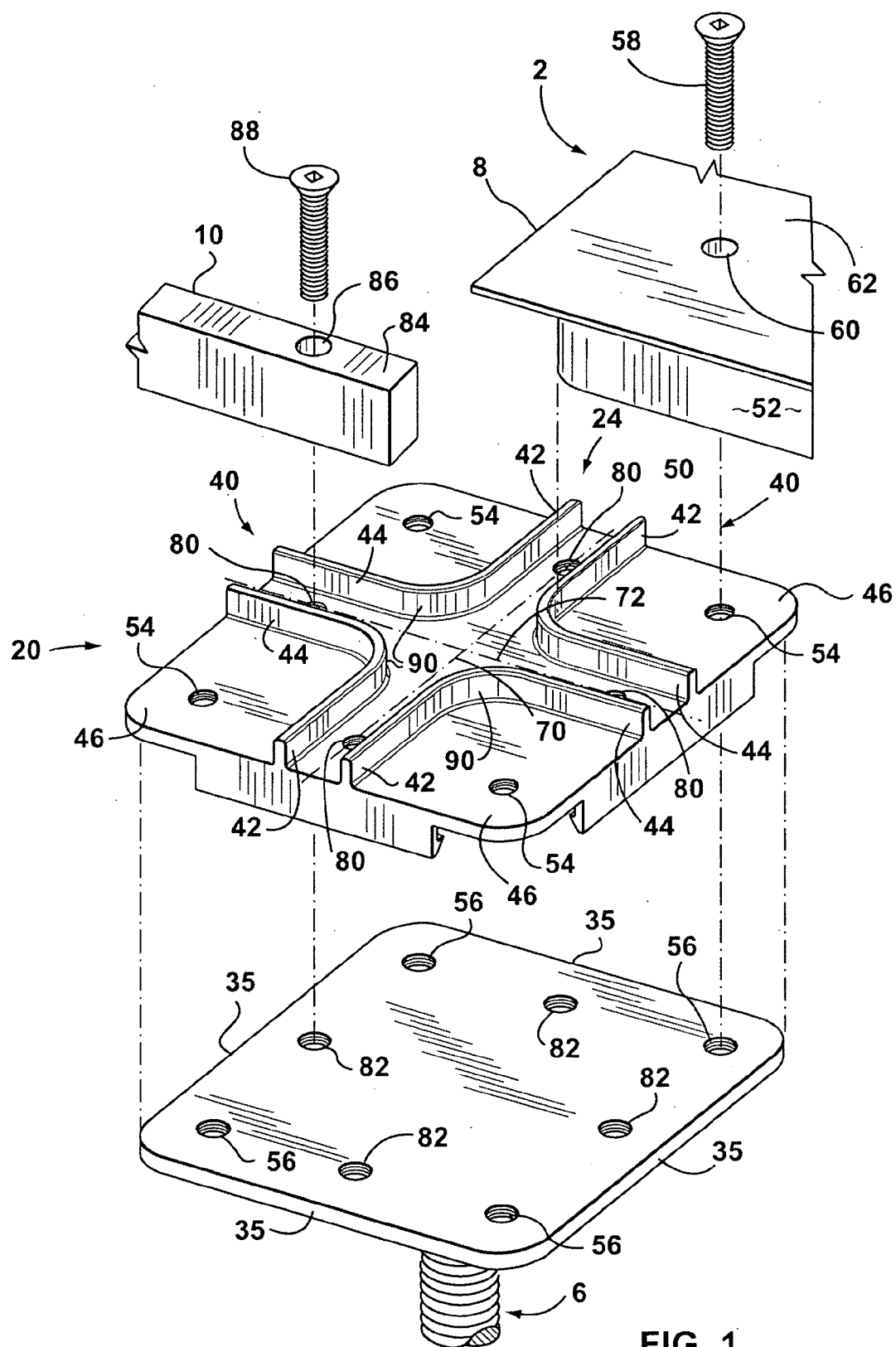


FIG. 1

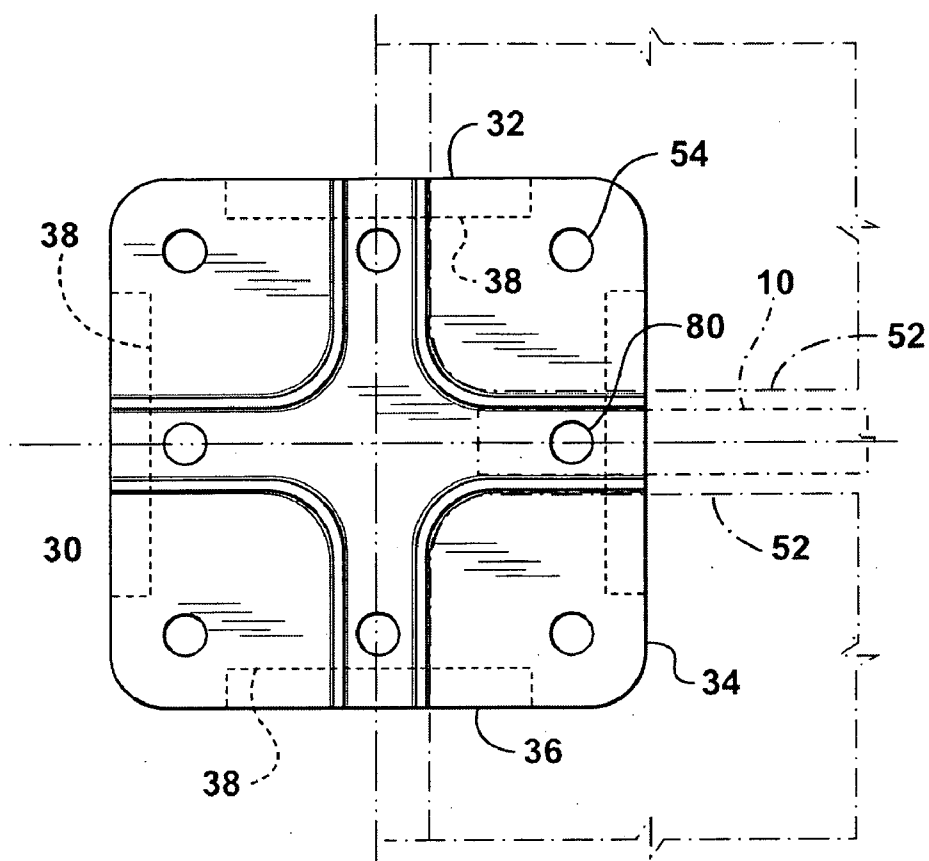


FIG. 2

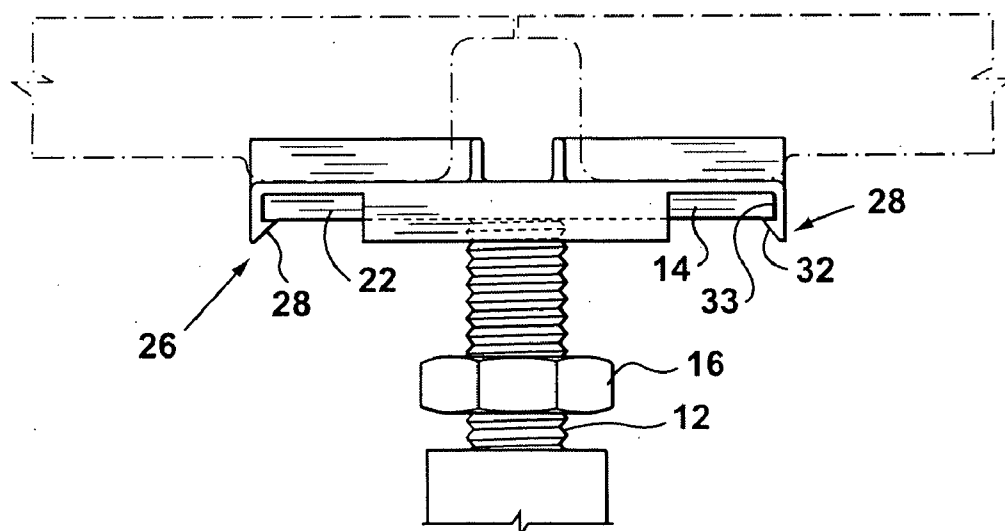


FIG. 3

CAP

FIELD OF INVENTION

[0001] This invention relates generally to a cap for a pedestal adapted to support adjacent floor panels defining a raised floor; and particularly relates to a cap for capturing a pedestal and for presenting a plurality of ribs for locating the floor panels.

BACKGROUND ART

[0002] Elevated floors or access floor panels have gained wide spread acceptance in the marketplace with the advent of the computer age. In particular, elevated floors are comprised of a plurality of access floor panels which are arranged in side by side relation in an array generally supported at their corners by a plurality of pedestals. Furthermore, stringers which are generally horizontal support members that span between the pedestals, may also be utilized to support the edges of a floor panel in a manner well known to those person skilled in the art.

[0003] Since there are many stringers and pedestals that are utilized to support a plurality of access floor panels to define the raised floor, there is a need to accurately and quickly locate adjacent floor panels in an efficient manner.

[0004] Furthermore, some prior art access floor panel systems include the placing of floor panels which can be comprised of metal onto the pedestals which are also duly comprised of metal. When a person walks upon the metallic floor panels and pedestals they can slide relative to one another so as to produce a noise such as a squeak or the like. It is generally preferable to attempt to eliminate or minimize this noise.

[0005] U.S. Pat. No. 4,558,544 illustrates a cushioning pad comprising a pad base and hoods which are open at the periphery of the pad base. When the cushioning pad is installed on a head member, each of the hoods receives one of the lugs and the lower face of the pad may be provided with a layer of adhesive.

[0006] Furthermore, the U.S. Pat. No. 4,996,818 teaches a polymeric base plate covered with carpet and featuring resilient tabs which are inwardly recessed from the side edges of the plate. Other arrangements are shown in U.S. Pat. No. 4,656,795 which relates to a head member presenting sets of mutually perpendicular regularly extending upstanding lugs arranged where adjacent lugs receive and retain a corner of the floor panels.

[0007] Moreover, U.S. Pat. No. 4,570,397 relates to a device where each of the pedestals is adjustably positioned both in a vertical and angular manner to position the top most portion of each unit in an even parallel plane. Furthermore, U.S. Pat. No. 3,938,295 teaches an access floor system with deep pile carpet covered panels. The deep pile fibers from adjacent panels intermingle with each other to visually obscure the cracks between the panels.

[0008] Finally, U.S. Pat. No. 3,943,674 teaches a false floor assembly of square panels supported on pedestals above a foundation. The panel corners rest on pedestals and the adjacent sides of neighbouring panels between pedestals are secured together by releasable ties that pass through the sides of each neighbouring panel. The area below the panels

is accessible by simply removing the ties and lifting one or more panels from the assembly.

[0009] Other arrangements are shown in U.S. Pat. No. 3,318,057 which illustrates a cap resting on a curved top portion of a pedestal.

[0010] These and other prior art structures and devices present relatively complicated structures.

[0011] It is an object of this invention to provide an improved device and method for locating and stabilizing adjacent access floor panels. It is another object of the invention to provide a cap capable of laterally securing floor panels.

[0012] It is an aspect of this invention to provide a cap for a pedestal adapted to support adjacent floor panels defining a raised floor said cap comprising a bottom surface for contacting said pedestal, said bottom surface including structure for capturing the pedestal; a top surface presenting a plurality of ribs for locating said floor panels.

[0013] It is a further aspect of this invention to provide a raised access floor system comprising of a plurality of floor panels arranged in side by side relation, said panel supported at their edges by stringers and at their corners by pedestals, said pedestal having an upper pedestal plate, and a cap adapted to snap onto said pedestal plate, wherein said cap presents a substantially rectangular top and bottom surface defining four corners, said bottom surface supported by said upper pedestal plate; said top surface including a plurality of ribs for locating corners of adjacent floor panels and locating ends of said stringer.

[0014] It is yet another aspect of this invention to provide a method of locating corners of a floor panel for support by a pedestal comprising the steps of placing a cap over said pedestal, said cap having capturing means for capturing said pedestal; a plurality of upstanding ribs for locating and stabilizing stringers between spaced apart ribs and for locating and stabilizing said corners of said floor panels between adjacent ribs.

[0015] These and other objects and features of the invention shall now be described in relation to the following drawings:

BRIEF DESCRIPTION OF DRAWING

[0016] FIG. 1 is a partial exploded view of the invention.

[0017] FIG. 2 is a top plan view of the cap.

[0018] FIG. 3 is a partial side elevational view of a pedestal and the cap.

BEST MODE FOR CARRYING OUT THE INVENTION

[0019] In the description which follows, like parts are marked throughout the specification and the drawings with the same respective reference numerals. The drawings are not necessarily to scale and in some instances proportions may have been exaggerated in order to more clearly depict certain features of the invention.

[0020] Generally speaking a plurality of floor panels 2 are adapted to be supported at their corners 4 by a plurality of pedestals 6 in a manner well known to those persons skilled

in the art. Furthermore the edges **8** may be supported by stringers **10** again in a manner well known to those persons skilled in the art.

[0021] The pedestals **6** include a threaded rod **12** to adjust the height of the pedestal plate or head **14** relative to the floor (not shown) by turning or rotating the threaded rod **12** vertically up or down as shown in **FIG. 3**. When the desired height is attained the adjusting nut **16** is manipulated so as to lock the height in place.

[0022] A cap **20** is provided which has a bottom surface **22** and top surface **24**. The top and bottom surface **22** and top surface **24** present a generally rectangular shape and in one embodiment include a square shape as shown in **FIGS. 1, 2** and **3**, which are substantially flat.

[0023] The bottom surface **22** includes capturing means **26** to capture the upper pedestal **14**. In particular, the capturing means **26** includes a plurality of snap on tabs **28** which are generally disposed along each of the edges **30, 32, 34** and **36**. In one embodiment the cap **20** is comprised of plastic and the tabs **28** include a bevelled edge **32** which is adapted to contact the pedestal plate **14** and spring outwardly so as to capture the edges as shown. More specifically the capturing means include a recess **33** adapted to receive the edges **35** of the pedestal **14**. The tabs **28** project inwardly relative to the edges **30, 32, 34** and **36** of the cap **20** as shown by lines **38**.

[0024] The figures show that the tabs **28** do not extend along the entire edges **30, 32, 34**, and so as to permit sliding movement of the cap **20** relative to the pedestal plate **14**. However, it is possible the tabs **28** can extend all the way around the periphery and be sized so as to permit some sliding motion. In another embodiment the cap can be sized to permit little sliding motion of the cap **20** and pedestal plate **14**.

[0025] The upper surface **24** of the cap **20** includes a plurality of ribs **40** for locating the floor panels **2**. In particular the upper surface **24** of cap **20** includes a plurality of adjacent ribs **42** and **44** located in each of the corners **46** of the upper surface **24** of the cap **20**. The adjacent ribs **42** and **44** and each of the corners **46** are adapted to locate and laterally stabilize the bottom **50** of a floor panel **2** as well as the sides **52** of the floor panel without fasteners. Alternatively fasteners may be used as described below.

[0026] Each of the corners **46** define quadrants on the top surface **24** of the cap **20**. Each of the corners or quadrants include holes **54** which are adapted to align co-axially with threaded holes **56** presented by the upper pedestal plate **14**. Accordingly one of the corners **4** of the floor panel **2** is located by the upstanding adjacent ribs **42** and **44**. A panel fastener **58** may be placed within a hole **60** which is disposed through the upper surface **62** of the floor panel **2** and the bottom **50** of the floor panel **2** to be aligned with the hole **54** for fastening to the threaded hole **56**. Each of the corners **4** of adjacent panels **2** may be attached in the same way so that edges **8** of adjacent panels **2** are disposed opposite each other so as to define a floor system.

[0027] The ribs **40** are also disposed in a manner so as to present a first set of spaced apart ribs **42** disposed along a first direction **70** and a second set of spaced apart ribs **44** disposed along a second direction **72**. First direction **70** is disposed substantially perpendicular to the second direction **72** so as to define a first central region disposed along

direction **70** and a second central region disposed along direction **72**. The spaced apart ribs **42** and **44** are adapted to locate and stabilize stringers **10** which may also be placed on top of the caps **20** as shown in the drawings. In other words in another embodiment of the invention stringers **10** may be used.

[0028] The cap **20** includes a plurality of holes disposed between spaced apart ribs **42** and **44** which holes **80** are adapted to be aligned with threaded holes **82** disposed in the pedestal plate **14**.

[0029] Each of the ends **84** of the stringers **10** include a hole **86** adapted to receive a stringer fastener **88** which aligns with the holes **80** and the threaded holes **82** so as to fasten the stringer to the pedestal plate **14**.

[0030] The spaced apart ribs **42** and **44** are arranged in substantially parallel spaced apart relation as shown in centered about central regions defined by first direction **70** and second direction **72**.

[0031] The adjacent ribs **42, 42** and **44, 44** are disposed generally perpendicular to one another and may merge with one another to define the curve portion **90**.

[0032] The snap on cap **20** as shown may be snapped on to an existing flat pedestal plate **14**. The snap on cap **20** locates the access floor panel **2** and provides lateral stability. This provides an inexpensive cost-effective method of providing positive location and lateral stability of the access floor panels **2** mounted to the top of an adjustable pedestal support.

[0033] The cap **20** can be comprised of a variety of materials including plastic or the like thus eliminating metal to metal contact between the panel **2** and the pedestal **6** thereby reducing squeak and rattle in the access floor system.

[0034] Moreover the method of locating corners of the floor panel for support by the pedestal comprises the steps of placing a cap over the pedestal where the cap has capturing means for capturing the pedestal **6**, and a plurality of upstanding ribs **42** and **44** for locating and stabilizing stringers and corners of the access floor panel **2**. The snap on method of application is generally fast and allows for cost effective installation.

[0035] In one embodiment of the invention the cap locates the floor panels **2** and provides lateral stability.

[0036] The method described herein provides an inexpensive fast method of providing a positive location and lateral stability of an access floor panel **2** mounted to the top of the adjustable pedestal support and eliminating metal to metal contact between the panel and pedestal which reduces squeak and rattle in the access floor system. The snap on cap supplies location of the panel and stringer if required.

[0037] Various embodiments of the invention have now been described in detail. Since changes in and/or additions to the above-described best mode may be made without departing from the nature, spirit or scope of the invention, the invention is not to be limited to said details.

I claim:

1. A cap for a pedestal adapted to support adjacent floor panels defining a raised floor said cap comprising:

(a) a bottom surface for contacting said pedestal, said bottom surface including means to capture said pedestal;

(b) a top surface presenting a plurality of ribs for locating said floor panels.

2. A cap as claimed in claim 1 wherein said capturing means comprises snap on tabs.

3. A cap as claimed in claim 1 wherein a corner of one floor panel is disposed between adjacent ribs.

4. A cap as claimed in claim 3 wherein said top surface is substantially rectangular to present four corners, each of said corners including adjacent ribs for locating a corner of said floor panel.

5. A cap as claimed in claim 4 wherein each said corner includes a hole co-axially disposed with a threaded hole presented by said pedestal for receiving a fastener adapted to fasten a corner of said floor panel to said pedestal.

6. A cap as claimed in claim 5 wherein said adjacent ribs are disposed substantially perpendicular to one another.

7. A cap as claimed in claim 6 wherein each said adjacent rib at said corner are spaced apart relative to one another so as to define centrally disposed spaced apart ribs for locating stringers therebetween.

8. A cap as claimed in claim 7 wherein said cap is comprised of plastic.

9. A raised access floor system comprising of a plurality of floor panels arranged in side by side relation, said panel supported at their edges by stringers and at their corners by pedestals, said pedestal having an upper pedestal plate, and a cap adapted to snap onto said pedestal plate, wherein:

(a) said cap presents a substantially rectangular top and bottom surface defining four corners, said bottom surface supported by said upper pedestal plate;

(b) said top surface including a plurality of ribs for:

(i) locating corners of adjacent floor panels;

(ii) locating ends of said stringer.

10. A raised access floor system as claimed in claim 9 wherein said plurality of ribs comprise:

(a) adjacent ribs for locating said corners of said floor panel;

(b) spaced apart ribs for locating said stringers.

11. A raised access floor system as claimed in claim 10 wherein said top and bottom surfaces include a plurality of holes co-axially disposed with threaded holes presented by said pedestal plate for receiving fasteners for fastening said floor panels to said pedestal plate.

12. A raised access floor system as claimed in claim 11 wherein said top and bottom surfaces include a plurality of stringer holds co-axially disposed with threaded holes presented by said pedestal plate for receiving fasteners for fastening said stringers to said pedestal plate.

13. A raised access floor system as claimed in claim 12 wherein said cap comprises of plastic.

14. A raised access floor system as claimed in claim 13 wherein said ribs locates said corners of said floor panels and stringers.

15. A method of locating corners of a floor panel for support by a pedestal comprising the steps of:

(a) placing a cap over said pedestal, said cap having:

(i) capturing means for capturing said pedestal

(ii) a plurality of upstanding ribs for locating and stabilizing stringers between spaced apart ribs and for locating and stabilizing said corners of said floor panels between adjacent ribs.

16. A method as claimed in claim 15 including a step of fastening said stringers to said pedestal.

17. A method as claimed in claim 16 including of fastening corners of said panel to said pedestals.

18. A method as claimed in claim 17 wherein said cap comprises of plastic so as to minimize noise generated between said stringers and pedestal and said floor panels and said pedestal.

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