



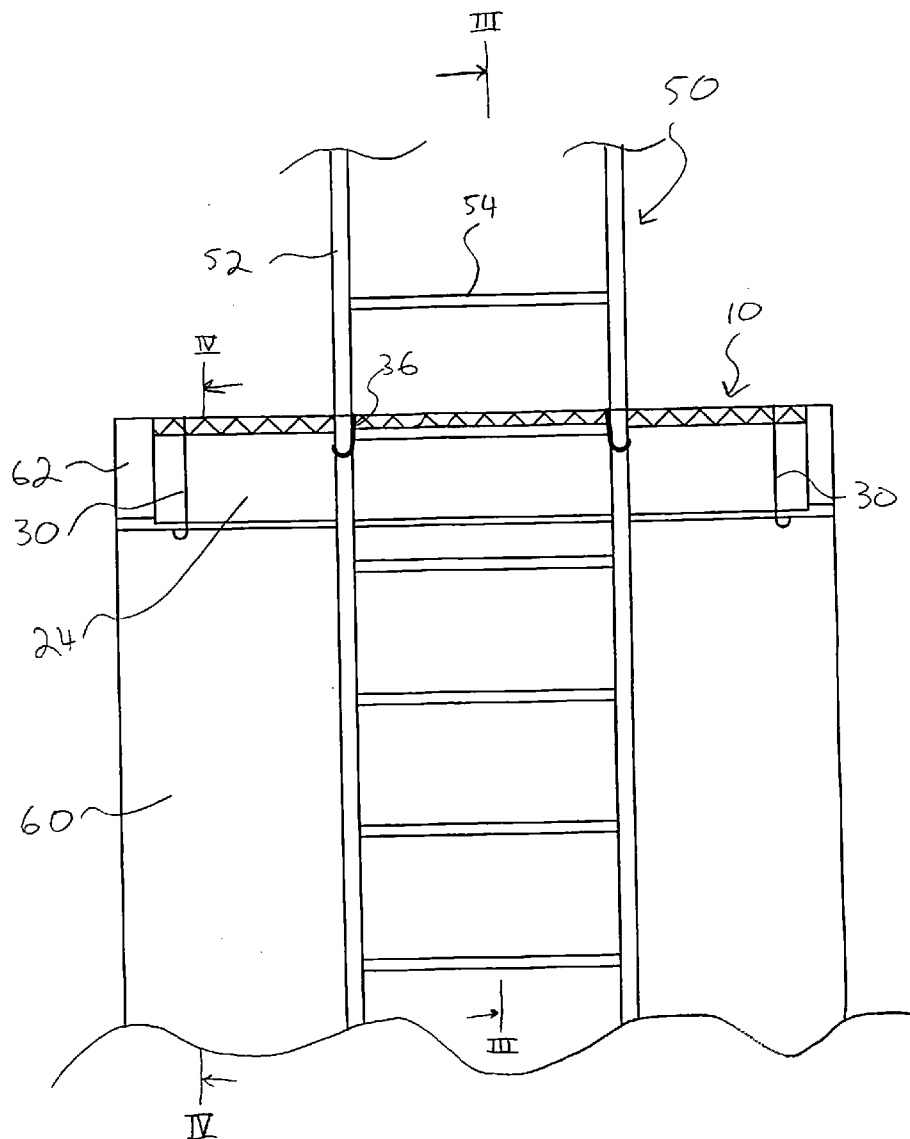
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(19) **United States**(12) **Patent Application Publication**
McDonough(10) **Pub. No.: US 2009/0311464 A1**(43) **Pub. Date: Dec. 17, 2009**(54) **SECURABLE PARAPET CAP ROOF MAT****Publication Classification**(76) Inventor: **Steven D. McDonough**, Pleasant
Prairie, WI (US)(51) **Int. Cl.**
E04D 13/00 (2006.01)(52) **U.S. Cl.** **428/100; 428/124; 52/745.06**(57) **ABSTRACT**

Correspondence Address:

JANSSON SHUPE & MUNGER LTD.**245 MAIN STREET****RACINE, WI 53403 (US)**

In a first embodiment a safety mat for use with a parapet cap on a wall is disclosed. The cap extends over the top of the wall and partially down each side of the wall. The safety mat includes a flexible pad having a width greater than a width of the top wall; a first cinch down strap extending at a first end thereof from an interior of the pad toward a first width end; and a second cinch down strap extending at a first end thereof from the interior of the pad toward a second width end.

(21) Appl. No.: **12/140,077**(22) Filed: **Jun. 16, 2008**

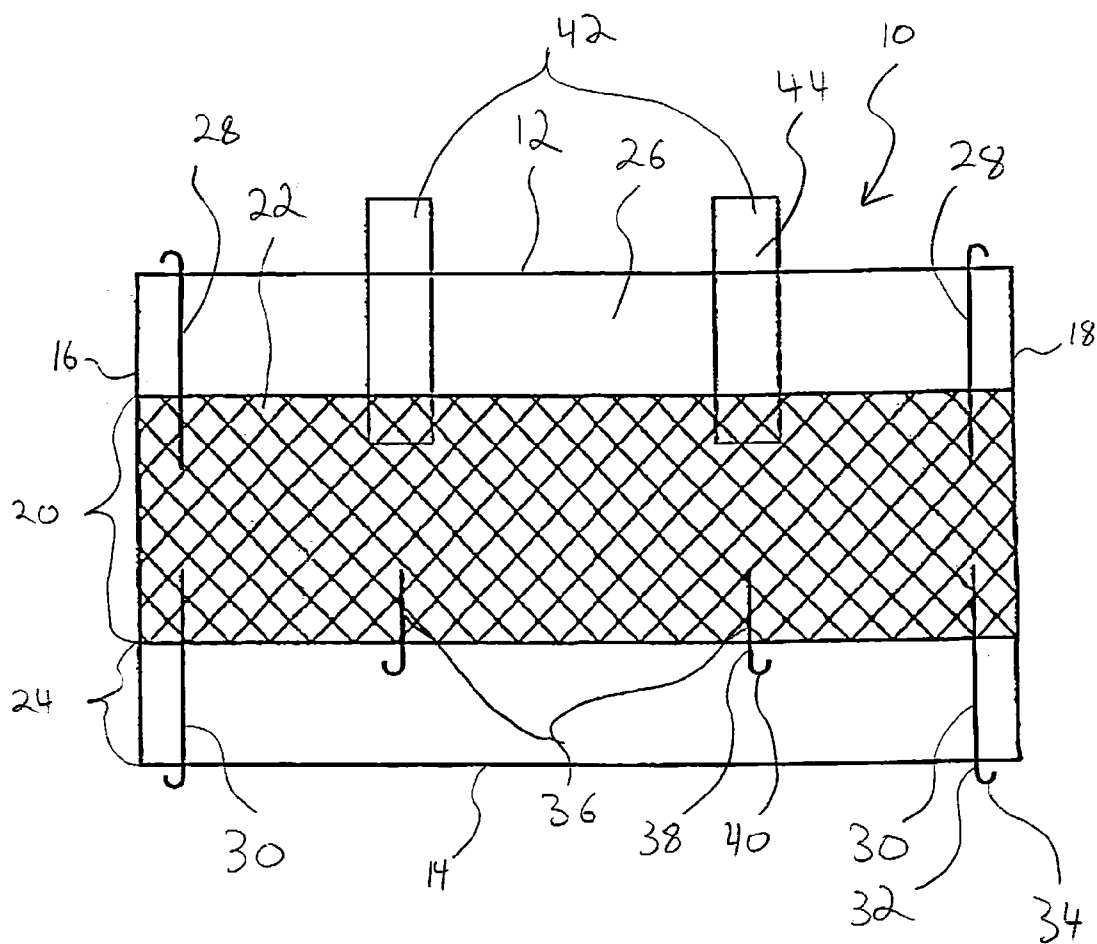


FIG. 1

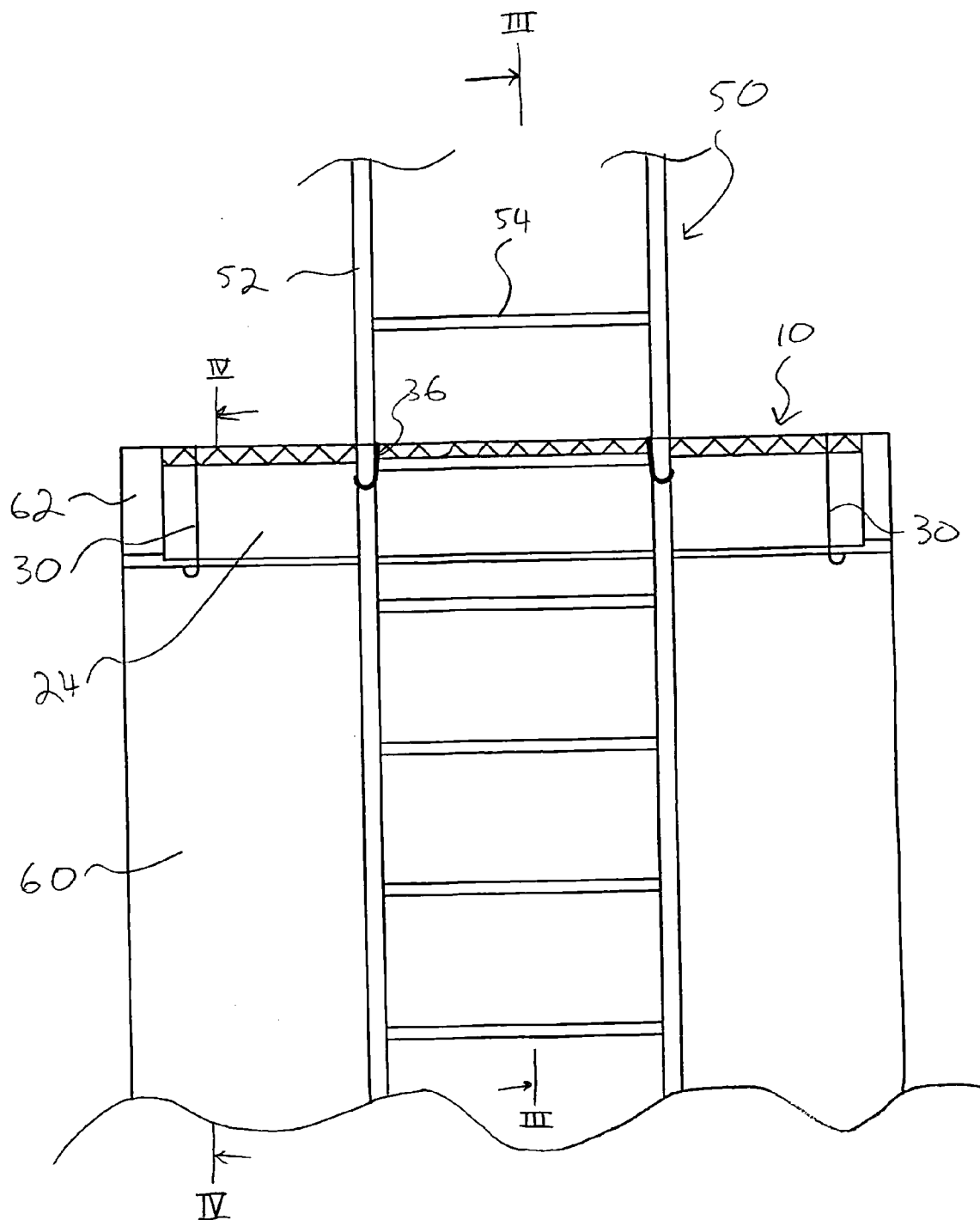


FIG. 2

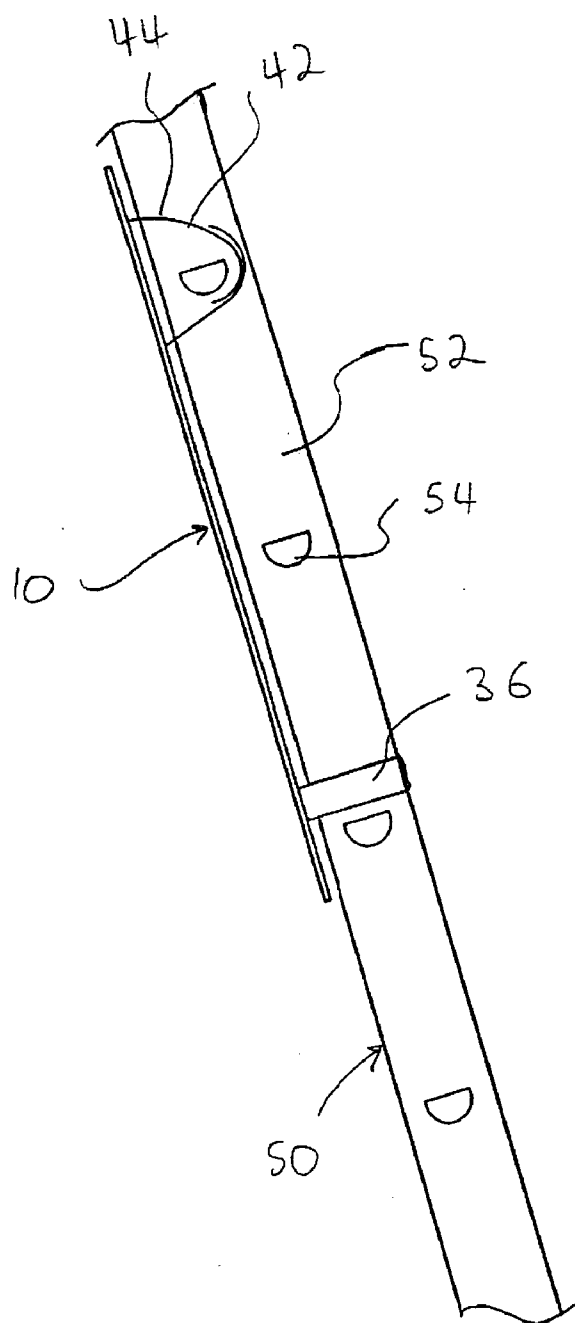


FIG. 3

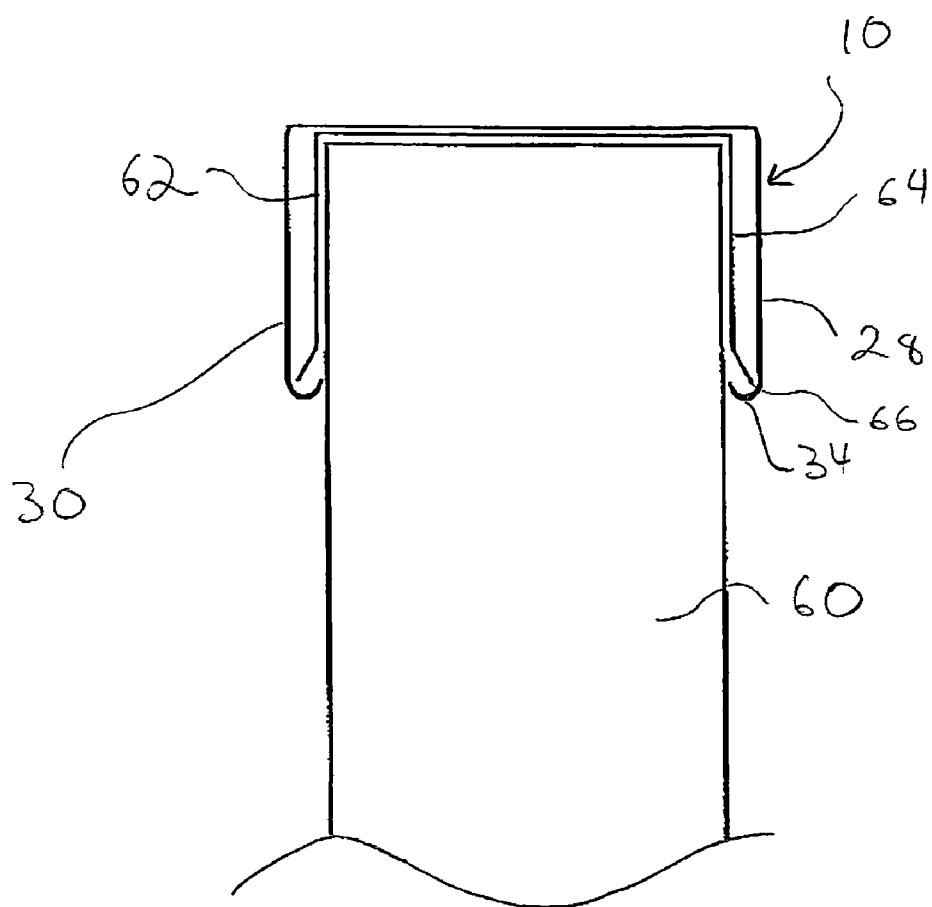


FIG. 4

SECURABLE PARAPET CAP ROOF MAT

FIELD OF THE INVENTION

[0001] The invention relates generally to the field of safety equipment and more particularly to a safety mat for use with a parapet wall having a cap.

BACKGROUND OF THE INVENTION

[0002] Many flat building roofs have parapet walls around the edges of the roof. The parapet wall in turn usually has a cap over the top of the wall and extending partially down each side of the wall for sealing the top of the wall. This cap is made of a variety of materials including sheet metal. In many cases in order to access the roof a ladder must be raised to the side of the parapet wall and the person trying to access the roof will have to step onto and over the wall from the ladder. Such a maneuver can be dangerous under the best conditions and especially so if the cap is wet from dew, rain snow, sleet or ice.

[0003] The concept of utilizing a mat over a surface to increase traction is well known. Various designs of mats for use in roofing settings have been put forth. U.S. Pat. No. 5,935,676 to Meniman et al. discloses a slip resistant floor mat for use on angled roofs. The mat includes a layered anti-slip surface with cloth reinforcing strip. The mat is held in place by hooks attached to the mat at one end.

[0004] Another example is seen in U.S. Pat. No. 4,674,245 to Turner in which a portable roof mat is disclosed. This mat is designed to be utilized on roof surfaces to create a walkway on a roof.

[0005] Other safety mat designs have incorporated features pertaining to how the anti-slip surface is to be designed. For example, U.S. Pat. No. 4,137,356 to Shoemaker et al. discloses a specific pattern of raised projections for supplying traction.

SUMMARY OF THE INVENTION

[0006] In a first embodiment a safety mat for use with a parapet cap on a wall is disclosed. The cap extends over the top of the wall and partially down each side of the wall. The safety mat includes a flexible pad having a width greater than a width of the top wall; a first cinch down strap extending at a first end thereof from an interior of the pad toward a first width end; and a second cinch down strap extending at a first end thereof from the interior of the pad toward a second width end.

[0007] In preferred embodiments of the mat the first and second cinch down straps include hooks on an end opposite the interior of the pad. It is highly preferred that the safety mat further include a third cinch down strap extending at a first end thereof from the interior of the pad toward a first width end; and a fourth cinch down strap extending at a first end thereof from the interior of the pad toward a second width end.

[0008] In further embodiments the width of the safety mat is dimensioned so that the flexible pad hangs over the parapet cap extending partially down the wall when the safety mat is in the deployed position. In preferred versions, the flexible pad of the safety mat further includes a length and an open pattern section extending the entire length of the pad and a part of the width of the pad. It is highly preferable that the open pattern section is at least as wide as the section of the parapet cap covering the top of the wall.

[0009] In another embodiment, the safety mat further includes a pair of ladder cinch down straps extending at a first end thereof from the interior of the pad toward a first width end. Such an embodiment could also include a pair of ladder mounting straps for holding mat onto a top of a ladder while the ladder is lifted.

[0010] In a still further embodiment a method of protecting a parapet cap disposed over the top of a wall and extending at least partially down each side of the wall is disclosed. The method includes the step of providing a safety mat including a flexible pad having a width greater than a width of the top wall; a first cinch down strap extending at a first end thereof from an interior of the pad toward a first width end; and a second cinch down strap extending at a first end thereof from the interior of the pad toward a second width end. Next, the safety mat is placed over the top of the wall so that first and second cinch down straps hang over different sides of the parapet cap. Finally each of the first and second cinch down straps are secured to a respective end of the parapet cap extending down the wall.

[0011] In other embodiments of the method the safety mat further includes a third cinch down strap extending at a first end thereof from the interior of the pad toward a first width end; and a fourth cinch down strap extending at a first end thereof from the interior of the pad toward a second width end. In such an embodiment the method further includes the step of securing each of the third and fourth cinch down strap to a respective end of the parapet cap extending down the wall. Furthermore, the cinch down straps could include hooks on an end opposite the interior of the pad.

[0012] In some embodiments the width of the flexible pad used in the method is dimensioned so that the flexible pad hangs over the parapet cap extending partially down the wall when the safety mat is in the deployed position. In preferred versions, the flexible pad further includes a length and an open pattern section extending the entire length of the pad and a part of the width of the pad. Highly preferably the width of the open pattern section is at least as wide as the section of the parapet cap covering the top of the wall.

[0013] In further embodiments the safety mat further includes a pair of ladder cinch down straps extending at a first end thereof from the interior of the pad toward a first width end. In such an embodiment, the method further includes the step of placing a ladder against the safety mat and securing the ladder cinch straps to the ladder. In addition the safety mat could further include a pair of ladder mounting straps for holding mat onto a top of a ladder while the ladder is lifted.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a top plan view of a safety mat according to a preferred embodiment;

[0015] FIG. 2 is a front view of the safety mat of FIG. 1 secured to a parapet cap with a ladder secured to the safety mat;

[0016] FIG. 3 is a sectional side view of the ladder of FIG. 2 taken along the line III-III of FIG. 2 with a safety mat attached for installation; and

[0017] FIG. 4 is a side sectional view taken along the line IV-IV of FIG. 2.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0018] Referring now to FIG. 1 a safety mat 10 according to a preferred embodiment is shown. In this embodiment the mat

10 is preferably made of rubber and is generally rectangular in shape, although other shapes could be utilized. The mat **10** includes opposite length sides **12**, **14** and a opposite width sides **16**, **18**. The mat **10** is comprised of three primary regions extending between the width sides **16**, **18**. The center region **20** is of a crossing pattern defining opening **22** for allowing moisture to pass through. On each side of the center region is a solid side region **24**. Furthermore, the mat **10** includes a top side **26** that is coated with an anti-slip coating like a sandpaper for grip. The bottom side (not shown) is not coated to protect the surface under the mat **10**.

[0019] The safety mat **10** further includes a cap strap system. This cap strap system includes two opposite pairs of cinch down straps **28**, **30**. The first pair of straps **28** extends from the interior of the mat near opposite width sides **16**, **18** and over the first length side **12**. The location near, but not at the width sides **16**, **18** ensures that the straps **28** stays over the mat **10** during use. The opposite pair of straps **30** extends from the interior of the mat near opposite width sides **16**, **18** and over the second length side **14**. Each strap includes an end **32** hanging over the length sides **12**, **14** and each end **32** is attached to a hook **34**. In this preferred embodiment the cinch down straps **28**, **30** are of a releasable cam-buckle design; however any tightening straps known in the art could be utilized. For example, bungee cords or ratcheting straps could be used. This holds tile for any of the cinch down straps described herein.

[0020] The safety mat **10** also includes a ladder strap system. This ladder strap system includes a pair of ladder cinch down straps **36**. The ladder cinch down straps **36** extend from the interior of the mat **10** closer to the first length side **12** than the second length side **14** and preferably a ladders-width apart and centered on the middle of the width of the mat **10**. The ladder cinch down straps **36** do not extend past the length sides **12**, **14**. Each of the ladder cinch down straps **36** includes an end **38** including a hook **40**.

[0021] Finally, the safety mat **10** includes a ladder mounting system. This ladder mounting system includes a pair of ladder lifting straps **42**. The ladder lifting straps **42** extend from the interior of the mat **10** closer to the second length side **14** than the first length side **12** and preferably a ladders-width apart and centered on the middle of the width of the mat **10**. The top **44** of one of the ladder lifting straps **42** and the bottom (not shown) of the other ladder lifting straps preferably includes hook and loop fasteners.

[0022] Referring now to FIGS. 2-4 the safety mat **10** is shown in use. In most cases in order to use the safety mat **10** the mat must be raised into position and attached to a cap on top of a parapet wall **60**. This is best accomplished by attaching the mat **10** to a ladder **50**. The ladder **50** includes side rails **52** and a plurality of steps **54**. The ladder cinch down straps **36** are attached to the side rails **52** several steps down from the top of the ladder **50** as seen in FIG. 2. Referring now to FIG. 3, the ladder lifting straps **42** are wrapped around a ladder step **54** above where the cinch down straps **36** are placed and secured to each other utilizing the hook and loop fasteners, thus securing the mat **10** to the ladder **50**.

[0023] Next, the ladder **50** is positioned with the safety mat **10** in contact with the cap **62** of a parapet wall **60**. Preferably the safety mat **10** is positioned with the center region **20** extending slightly over the sides **64** of the cap **62**. This will keep moisture from building up on top of the safety mat **10**. Once the ladder **50** is raised and positioned, the person utilizing the mat **10** can climb the ladder and undo the ladder

lifting straps **42** to allow the safety mat **10** to overlap the top of the cap **62** as seen in FIG. 4.

[0024] The final step of the installation is to secure the cap strap system to the cap **62**. The cinch down straps **28**, **30** are put into place with the hook **34** over a lower edge **66** of the cap **62**. The cinch down straps **28**, **30** are then tightened and the safety mat **20** is secured to the cap **62**. It is important to note that preferably the ladder cinch down straps **36** remain in place in order to keep the ladder in place during use.

[0025] While the principles of the invention have been shown and described in connection with specific embodiments, it is to be understood that such embodiments are by way of example and are not limiting.

1. A safety mat for use with a parapet cap on a wall, the cap extending over the top of the wall and partially down each side of the wall, the mat comprising:

a flexible pad having a width greater than a width of the top wall;

a first cinch down strap extending at a first end thereof from an interior of the pad toward a first width end; and

a second cinch down strap extending at a first end thereof from the interior of the pad toward a second width end.

2. The safety mat of claim 1 wherein the first and second cinch down straps include hooks on an end opposite the interior of the pad.

3. The safety mat of claim 1 further comprising a third cinch down strap extending at a first end thereof from the interior of the pad toward a first width end; and

a fourth cinch down strap extending at a first end thereof from the interior of the pad toward a second width end.

4. The safety mat of claim 3 wherein the cinch down straps include hooks on an end opposite the interior of the pad.

5. The safety mat of claim 4 wherein the width is dimensioned so that the flexible pad hangs over the parapet cap extending partially down the wall when the safety mat is in a deployed position.

6. The safety mat of claim 5 wherein the flexible pad further includes a length and an open pattern section extending the entire length of the pad and a part of the width of the pad.

7. The safety mat of claim 6 wherein the width of the open pattern section is at least as wide as the section of the parapet cap covering the top of the wall.

8. The safety mat of claim 5 further comprising a pair of ladder cinch down straps extending at a first end thereof from the interior of the pad toward a first width end.

9. The safety mat of claim 8 further comprising a pair of ladder mounting straps for holding mat onto a top of a ladder while the ladder is lifted.

10. A method of protecting a parapet cap disposed over the top of a wall and extending at least partially down each side of the wall, the method comprising

providing a safety mat including a flexible pad having a width greater than a width of the top wall; a first cinch down strap extending at a first end thereof from an interior of the pad toward a first width end; and a second cinch down strap extending at a first end thereof from the interior of the pad toward a second width end;

placing the safety mat over the top of the wall so that first and second cinch down straps hang over different sides of the parapet cap; and

securing each of the first and second cinch down straps to a respective end of the parapet cap extending down the wall.

11. The method of claim **10** wherein the safety mat further includes a third cinch down strap extending at a first end thereof from the interior of the pad toward a first width end; and a fourth cinch down strap extending at a first end thereof from the interior of the pad toward a second width end, the method further comprising the step of securing each of the third and fourth cinch down strap to a respective end of the parapet cap extending down the wall.

12. The method of claim **11** wherein each of the cinch down straps include hooks on an end opposite the interior of the pad.

13. The method of claim **12** wherein the width of the flexible pad is dimensioned so that the flexible pad hangs over the parapet cap extending partially down the wall when the safety mat is in the deployed position.

14. The method of claim **13** wherein the flexible pad further includes a length and an open pattern section extending the entire length of the pad and a part of the width of the pad.

15. The method of claim **14** wherein the width of the open pattern section is at least as wide as the section of the parapet cap covering the top of the wall.

16. The method of claim **13** wherein the safety mat further includes a pair of ladder cinch down straps extending at a first end thereof from the interior of the pad toward a first width end the method further comprising the step of placing a ladder against the safety mat and securing the ladder cinch straps to the ladder.

17. The method of claim **16** wherein the safety mat further includes a pair of ladder mounting straps for holding mat onto a top of a ladder while the ladder is lifted.

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