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### DEBRIS CHUTE ASSEMBLY

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#### Abstract

A debris chute assembly including a plurality of wall members selectively engaged with a scaffold. The plurality of wall members includes a passageway defined in a wall member of the plurality of wall members. A portion of the scaffold is received within the passageway. A flange is also provided on the wall member. The flange is removable securable to the scaffold. The wall member further includes a fastener provided thereon. The debris chute assembly may also include the scaffold which includes a plurality of standards and a plurality of ledgers. The plurality of standards are spaced a distance apart from one another. The plurality of ledgers extend between adjacent standards of the plurality of standards.

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## Background/Summary

REFERENCE TO RELATED APPLICATIONS [0001] This application is a Continuation-in-Part of U.S. patent application Ser. No. 18/388,213, filed on Nov. 9, 2023; the disclosure of which is incorporated herein by reference.

### TECHNICAL FIELD

[0002] The disclosure relates to a debris chute assembly and more particularly pertains to a new debris chute assembly for removing debris from a height during construction or similar activity.

### BACKGROUND ART

[0003] The prior art discloses a myriad of debris chutes for use at construction sites or similar to remove debris from a height. It is known, for example, that plywood debris chutes are constructed to mount within scaffolds to form a debris chute. However, such debris chutes are labor intensive to construct, and plywood is not as durable as many types of sheet metal.

[0004] U.S. Patent Publication Application No. 2020/0307915 (Stodulka) describes a debris chute comprising wall members and corner members made of sheet metal that hook onto ledgers of a scaffold. Fasteners are not positively described in the specification of this application beyond the hooked portions of the wall members and corner members which hang on ledgers of the scaffold. Without further attachment or locking mechanism, the wall members of the disclosed debris chute are likely to swing due to wind or other forces. Such movement would facilitate damage to the wall members as debris is dropped onto the swinging wall members and facilitate the release of dust or other objects through gaps formed between wall members.

### SUMMARY OF THE INVENTION

[0005] There is a need in the art for an improved debris chute assembly. The debris chute assembly disclosed herein includes wall members having a wall flange extending outwardly from one side thereof. The wall members further each include a fastener extending outwardly from the wall flange, where the fastener is configured to receive a tie wire which wraps around such that it circumscribes the standard of the scaffold to secure the wall member to the scaffold. Each wall member further includes a hook or connector defining a passageway in which a ledger of the scaffold is receivable. Certain wall members of the debris chute assembly further include an aperture therein and a door is provided adjacent the aperture. The door is movable between an open position and a closed position. In one embodiment, the door is biased to the closed position or is self-closing.

[0006] In one aspect, an exemplary embodiment of the present disclosure may provide a debris chute assembly including a plurality of wall members selectively engageable with a scaffold. A passageway is defined by a wall member of the plurality of wall members. A portion of the scaffold is received within the passageway. A flange provided on the wall member is removably securable to the scaffold. A fastener is provided on the wall member.

[0007] In another aspect, an exemplary embodiment of the present disclosure may provide a debris chute assembly including a scaffold having a plurality of standards spaced a distance apart from one another and a plurality of ledgers extending between adjacent standards of the plurality of standards. A ledger of the plurality of ledgers is received within a passageway defined by a wall member of the debris chute assembly. A flange provided on the wall member and a standard of the plurality of standards are removably securable to one another. In another aspect, an exemplary embodiment of the present disclosure may provide that the wall member includes a wall panel

having a top, a bottom, and a first side and a second side extending between the top and the bottom. The flange extends outwardly from the first side of the wall panel. In another aspect, an exemplary embodiment of the present disclosure may provide that the wall panel further includes an inner surface and an outer surface extending between the top and the bottom of the wall panel, and that the flange is oriented at an angle greater than 90 degrees relative to the inner surface of the wall panel. In another aspect, an exemplary embodiment of the present disclosure may provide that the wall member includes a wall panel having a top, a bottom and a first side and a second side extending between the top and the bottom, and a connector extending outwardly from an outer surface of the wall panel proximate the top of the wall panel. A passageway is defined by the connector. In another aspect, an exemplary embodiment of the present disclosure may provide that the fastener extends outwardly from an outer surface of the connector. In another aspect, an exemplary embodiment of the present disclosure may further provide a tie wire operably engaged with the fastener. In another aspect, an exemplary embodiment of the present disclosure may provide that the tie wire extends between the portion of the scaffold and the fastener. In another aspect, an exemplary embodiment of the present disclosure may further provide a channel defined in the debris chute assembly. The channel is bounded and defined by the inner surfaces of the wall panel and an inner surface of the flange of all of the plurality of wall members. In another aspect, an exemplary embodiment of the present disclosure may further provide that where the plurality of wall members includes a first wall member and a second wall member. An aperture is defined between an outer surface and an inner surface of the second wall member. The aperture is in fluid communication with the channel of the debris chute assembly. In another aspect, an exemplary embodiment of the present disclosure may provide a door located proximate the aperture defined in the second wall panel. The door is moveable between an open position and a closed position. When the door is in the open position access to the channel of the debris chute assembly is enabled and when door is in the closed position access to the channel of the debris chute assembly is restricted. In another aspect, an exemplary embodiment of the present disclosure may further provide a securement mechanism which selectively engages the door to a standard of the plurality of standards. In another aspect, an exemplary embodiment of the present disclosure may further provide where the door is biased into the closed position. In another aspect, an exemplary embodiment of the present disclosure may further provide where the plurality of wall members include a plurality of first wall members, a plurality of second wall members, and at least one third wall member. In another aspect, an exemplary embodiment of the present disclosure may further provide where the plurality of first wall members includes a first flange extending outwardly from first side of the wall panel and a second flange extending outwardly from the second side of the wall panel. In another aspect, an exemplary embodiment of the present disclosure may further provide where the plurality of wall members includes a first lip extending outwardly from first side of the wall panel and a second lip extending outwardly from the second side of the wall panel. In another aspect, an exemplary embodiment of the present disclosure may further provide where the third wall member is a hopper wall member.

[0008] In another aspect, an exemplary embodiment of the present disclosure may provide a method of assembling a debris chute assembly. The method includes providing a scaffold and providing a plurality of wall members. The method further includes defining a passageway in each wall member of the plurality of wall members and providing an attachment mechanism proximate a top of each wall member. The method further includes selectively engaging a line with the fastener of a wall member of the plurality of wall members and lowering the wall member of the plurality of wall members onto a portion of the scaffold. The method further includes receiving the portion of the scaffold in the passageway of the wall member and hanging the wall member from the portion of the scaffold. The method further includes hanging the wall member from the portion of the scaffold.

[0009] In a further aspect, an exemplary embodiment of the present disclosure may provide the

method of assembling a debris chute assembly that includes disengaging the line from the attachment mechanism on the wall member and selectively engaging the line with a fastener on another wall member of the plurality of wall members. The method further includes lowering the another wall member onto another portion of the scaffold via the line, receiving the another portion of the scaffold into the passageway of the another wall member, and hanging the another wall member from the another portion of the scaffold. In a further aspect, an exemplary embodiment of the present disclosure may provide where providing the scaffold further includes spacing a plurality of standards of a scaffold apart from one another and extending a ledger of a plurality of ledgers of the scaffold between adjacent standards of the plurality of standards. In a further aspect, an exemplary embodiment of the present disclosure may provide where the wall member of the plurality of wall members are lowered onto the ledger of the plurality of ledgers, the ledger is received within the passageway of the wall member, and the wall member is hung from the ledger. [0010] In another aspect, an exemplary embodiment of the present disclosure may provide a method of assembling a debris chute assembly including providing a scaffold and providing a plurality of wall members. The method may include engaging a wall member of the plurality of wall members with a portion of the scaffold. The method may further include providing a flange on the wall member and providing a fastener on the flange. The method may further include engaging a tie wire with the fastener and securing the tie wire and thereby the flange and the wall member to a portion of the scaffold.

[0011] In another aspect, an exemplary embodiment of the present disclosure may provide a step of securing the tie wire further that includes threading the tie wire through an eye of the fastener, extending the tie wire around the portion of the scaffold, tightening the tie wire around the portion of the scaffold, and securing the flange and the wall member to the portion of the scaffold via the tie wire. In another aspect, an exemplary embodiment of the present disclosure may provide where the step of tightening the tie wire around the standard includes engaging a portion of the flange of the wall member with a portion of an adjacent wall member of the plurality of wall members and frictionally securing the adjacent wall member to the another portion of the scaffold.

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## Description

### BRIEF DESCRIPTION OF THE DRAWINGS

[0012] One or more exemplary embodiment(s) of the present disclosure is set forth in the following description, is shown in the drawings and is particularly and distinctly pointed out and set forth in the appended claims. The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate various example configurations and methods, and other example embodiments of various aspects of the invention. It will be appreciated that the illustrated element boundaries (e.g., boxes, groups of boxes, or other shapes) in the figures represent one example of the boundaries. One of ordinary skill in the art will appreciate that in some examples one element may be designed as multiple elements or that multiple elements may be designed as one element. In some examples, an element shown as an internal component of another element may be implemented as an external component and vice versa. Furthermore, elements may not be drawn to scale.

[0013] FIG. 1 (FIG. 1) is a perspective view of a first embodiment of a debris chute assembly according to the disclosure.

[0014] FIG. 2 (FIG. 2) is a perspective view of the debris chute assembly of FIG. 1.

[0015] FIG. 3 (FIG. 3) is a detailed perspective view of a corner member of the debris chute assembly of FIG. 1.

[0016] FIG. 4 (FIG. 4) is an exploded perspective view of a corner member and a standard of the debris chute assembly of FIG. 1.

[0017] FIG. 5 (FIG. 5) is a front view of a corner member of an embodiment of the disclosure.

[0018] FIG. 6 (FIG. 6) is a rear view of a corner member of an embodiment of the disclosure.

[0019] FIG. 7 (FIG. 7) is an exploded perspective view of a corner member and a standard of an embodiment of the disclosure.

[0020] FIG. 8 (FIG. 8) is a front view of a corner member of an embodiment of the disclosure.

[0021] FIG. 9 (FIG. 9) is a rear view of a corner member of an embodiment of the disclosure.

[0022] FIG. 10 (FIG. 10) is an exploded perspective view of a corner member and a standard of an embodiment of the disclosure.

[0023] FIG. 11 (FIG. 11) is a front view of a corner member of an embodiment of the disclosure.

[0024] FIG. 12 (FIG. 12) is a rear view of a corner member of an embodiment of the disclosure.

[0025] FIG. 13 (FIG. 13) is an exploded detail perspective view of an embodiment of the disclosure.

[0026] FIG. 14 (FIG. 14) is an in-use view of an embodiment of the disclosure.

[0027] FIG. 15 (FIG. 15) is an enlarged partial front, left, top isometric perspective view of a second embodiment of a debris chute assembly in accordance with the present disclosure.

[0028] FIG. 16 (FIG. 16) is an enlarged front, left, top isometric perspective view of a second embodiment of a first wall member of the debris chute assembly of FIG. 15 shown in isolation.

[0029] FIG. 17 (FIG. 17) is a further enlarged front, left, top perspective view of a highlighted region of FIG. 16, showing a portion of the second embodiment of the first wall member.

[0030] FIG. 18 (FIG. 18) is an enlarged front, left, top isometric perspective view of a second embodiment of a second wall member of the debris chute assembly of FIG. 15 shown in isolation.

[0031] FIG. 19 (FIG. 19) is an enlarged and partially exploded front, left, top perspective view of the second embodiment of the second wall member shown in FIG. 18.

[0032] FIG. 20 (FIG. 20) is an enlarged front, left, top isometric perspective view of a door of the debris chute assembly of FIG. 15 shown in isolation.

[0033] FIG. 21 (FIG. 21) is a further enlarged front, left, top perspective view of the highlighted region of FIG. 20.

[0034] FIG. 22 (FIG. 22) is an enlarged partial front, left, top isometric perspective operational view of the debris chute assembly as shown in FIG. 15, showing the door and the second embodiment of the second wall member being installed onto the second embodiment of the debris chute assembly.

[0035] FIG. 23 (FIG. 23) is a further enlarged front, left, top perspective view of the highlighted region of FIG. 15, showing the engagement of the second embodiment of the second wall member with one of a plurality of standards of the debris chute assembly.

[0036] FIG. 24 (FIG. 24) is a cross-section looking in the direction of line 24-24 of FIG. 23.

[0037] FIG. 25 (FIG. 25) is an enlarged front, left, top perspective operational view of the debris chute assembly in accordance with the present disclosure shown in use.

[0038] FIG. 26 (FIG. 26) is a front, left, top isometric perspective view of a third embodiment of a debris chute assembly in accordance with the present disclosure.

[0039] FIG. 27 (FIG. 27) is an enlarged front, left, top isometric perspective view of a third embodiment of a first wall member of the debris chute assembly of FIG. 26 shown in isolation.

[0040] FIG. 28 (FIG. 28) is a further enlarged front, left, top perspective view of a highlighted region of FIG. 27, showing a portion of the second embodiment of the first wall member.

[0041] FIG. 29 (FIG. 29) is an enlarged front, left, top isometric perspective view of a third embodiment of a second wall member of the debris chute assembly of FIG. 26 shown in isolation.

[0042] FIG. 30 (FIG. 30) is an enlarged front, left, top isometric perspective view of a third wall member of the debris chute assembly of FIG. 26 shown in isolation.

[0043] FIG. 31 (FIG. 31) is a further enlarged front, left, top isometric perspective view of a highlighted region of FIG. 30, showing a portion of the third wall member.

[0044] FIG. 32 (FIG. 32) is a cross-section looking in the direction of line 32-32 of FIG. 26.

[0045] FIG. 33 (FIG. 33) is an enlarged top plan view of a highlighted region of FIG. 32 showing how the wall members are secured to the scaffold.

[0046] FIG. 34 (FIG. 34) is an enlarged top plan view of a portion of the highlighted region of FIG. 32, showing an alternative variant of how the wall members are secured to the scaffold.

[0047] FIG. 35 (FIG. 35) is an enlarged front, left, top perspective view of a fourth embodiment of a debris chute assembly in accordance with the present disclosure.

[0048] FIG. 36 (FIG. 36) is an enlarged front, left, top isometric perspective view of a fifth embodiment of a second wall member of the debris chute assembly of FIG. 35 shown in isolation.

#### DETAILED DESCRIPTION

[0049] With reference now to the drawings, and in particular to FIGS. 1 through 14 thereof, a new debris chute embodying the principles and concepts of an embodiment of the disclosure and generally designated by the reference numeral 10 will be described.

[0050] As best illustrated in FIGS. 1 through 14, the debris chute assembly 10 generally comprises a scaffold 12 having a plurality of standards 14 and a plurality of ledgers 22. The standards 14 are spaced from each other and extend between a top end 16 and a bottom end 18. The standards 14 define a channel 20 between the standards 14. Each ledger 22 is coupled to and extends between a pair of associated standards 14 of the plurality of standards 14. The ledgers 22 are arranged in a plurality of levels 24 which are spaced from each other along the channel 20. In each level 24, the ledgers 22 form a closed loop around the channel 20.

[0051] The scaffold 12 also includes a plurality of rosettes 26 and a plurality of wedge pins 28. Each rosette 26 is coupled to an associated standard 14 of the plurality of standards 14, and each wedge pin 28 extends through an associated ledger 22 of the plurality of ledgers 22 and an associated rosette 26 of the plurality of rosettes 26, thereby securing the associated ledger 22 to the associated rosette 26. It is contemplated that other embodiments may not have the scaffold 12 but may instead use vertical and horizontal members similar to the standards 14 and ledgers 22 of the scaffold 12. It is noted, however, that a particular advantage of including the scaffold 12 is that the scaffold 12 may be easily attached to further scaffolding 96 built for workers to navigate to perform various construction and repair activities and to access the debris chute assembly 10. The scaffold 12 of some embodiments may not have rosettes 26 and wedge pins 28, instead relying on alternative attachment means known to the art such as clamps.

[0052] A plurality of wall members 30 is removably coupled to the scaffold 12. The wall members 30 are arranged in a plurality of tubular sections 32 which surround the channel 20. Each tubular section 32 is coupled to the ledgers 22 of an associated level 24 of the plurality of levels 24. Each wall member 30 of the plurality of wall members 30 comprises a wall panel 34, a hook 40, and a pair of wall flanges 42. As best seen in FIG. 13, Each wall panel 34 has an outer surface 34A, an inner surface 34B, an upper end 36, a lower end 37, and a pair of lateral edges 38 extending between the upper end 36 and lower end 37. The inner surfaces 34B of the wall panels 34 bound and define the channel 20 extending through debris chute assembly 10. The hook 40 is coupled to an upper end 36 of the wall panel 34 and a passageway 40A is defined between the hook 40 and outer surface 34A. Hook 40 is configured to receive an associated ledger 22 of the ledgers 22 and to enable the wall panel 34 to hang from the associated ledger 22 of the ledgers 22 of the associated level 24. The hook 40 extends outwardly from the channel 20 and from the wall panel 34. The pair of wall flanges 42 is coupled to a pair of lateral edges 38 of the wall panel 34. The wall flanges 42 extend inwardly into the channel 20 from the wall panel 34, and each wall flange 42 of the pair of wall flanges 42 is oriented perpendicularly to the wall panel 34. The wall panel 34, hook 40, and wall flanges 42 are formed of a unitary sheet metal but may use other suitable materials. A lower end 44 of each tubular section 32 except a bottommost section 46 of the plurality of tubular sections 32 overlaps an upper end 36 of an associated adjacent tubular section 32 of the plurality of tubular sections 32, closing any gaps that would otherwise form between tubular sections 32.

[0053] One of the wall members 30 of a topmost section 48 of the plurality of tubular sections 32

defines a hopper wall member **50**, and other embodiments may include more hopper wall members **50**. The wall panel **34** of the hopper wall member **50** defines an aperture **52** which extends through the wall panel **34**. The hopper wall member **50** further comprises a door **54** to access the channel **20** through the aperture **52**, a bar **62**, and a prop **64**. The door **54** is pivotally coupled to the wall panel **34** of the hopper wall member **50** and is movable between an open position **56** and a closed position **58** with respect to the aperture **52**. The door **54** has a hooked upper edge **60** which extends around the bar **62**, which is coupled to the wall panel **34**. The bar **62** is oriented horizontally so that the door **54** is pivotable around the bar **62** and gravity biases the door **54** toward the closed position **58**.

[0054] The prop **64** is engageable with the door **54** to maintain the door **54** in the open position **56**. The prop **64** is telescopically extendable and is mounted to the door **54** and the wall panel **34** of the hopper wall member **50**. The prop **64** is lockable in an extended position to maintain the door **54** away from the wall panel **34** in the open position **56**. A locking pin **66** or similar may be employed to lock the prop **64** in the extended position. It may be possible to secure the prop **64** in multiple positions such that the door **54** may be adjusted to various degrees of openness with respect to the aperture **52**.

[0055] A plurality of corner members **68** is removably coupled to the scaffold **12**. Each corner member **68** is releasably mounted to an associated standard **14** of the plurality of standards **14** and is positioned between a pair of associated wall members **30** of the plurality of wall members **30**. The corner members **68** act to close gaps made between wall members **30** of the same tubular section **32** and keep the wall members **30** from swinging inwardly into the channel **20** due to wind or other external forces.

[0056] Each corner member **68** comprises a corner panel **70**, an elongated member **78**, and a plurality of couplers **84**. The corner panel **70** engages the pair of associated wall members **30** to retain the panels of the pair of associated wall members **30** in a fixed position with respect to the scaffold **12**. The corner panel **70** comprises a central portion **72** and a pair of flange portions **74**. The pair of flange portions **74** is coupled to a pair of side edges **76** of the central portion **72**, and each flange portion **74** engages the wall flange **42** of one of the pair of associated wall members **30**. The flange portions **74** may form 45-degree angles with the central portion **72** to align with the wall flanges **42** of the associated wall members **30**. The corner panel **70** comprises a unitary sheet metal but may use other suitable materials.

[0057] The elongated member **78** is coupled to the corner panel **70** and is oriented parallel to the associated standard **14**. The plurality of couplers **84** is coupled to the elongated member **78** and the associated standard **14**, thereby securing the corner member **68** to the standard **14**. A downward end **92** of each corner member **68** except a bottommost corner member (not shown) overlaps an upward end of an associated adjacent corner member **68** of the plurality of corner members **68**, covering any gaps that would otherwise be formed between adjacent corner members **68**.

[0058] Various embodiments of the corner members **68** are depicted in the figures. In reference to FIGS. **4** through **6**, a first embodiment of the corner members **68** is depicted, in which the elongated member **78** comprises a chain **80**, and each coupler **84** of the plurality of couplers **84** comprises a U-bolt clamp **86**. Each coupler **84** is interlocked with the chain **80** and clamps onto the associated standard **14**. Couplers **84** of similar embodiments may include pipe clamps, ties, latches, or the like.

[0059] FIGS. **7** through **9** show a second embodiment of the corner members **68**, in which the elongated member **78** comprises a slotted channel **82**, and each coupler **84** comprises a quick-chain link **88** and a U-bolt clamp **86**. The quick-chain link **88** of each coupler **84** is interlocked with the slotted channel **82**. The U-bolt interlocks with the quick-chain link **88** and clamps onto the associated standard **14**. Couplers **84** of similar embodiments may include pipe clamps, ties, latches, or the like.

[0060] In reference to FIGS. **10** through **12**, a third embodiment of the corner members **68** is

depicted in which the elongated member **78** comprises a channel **82** and each coupler **84** of the plurality of couplers **84** comprises a wedge pin coupling **90**. Each coupler **84** of the plurality of couplers **84** is coupled to an associated rosette **26** on the associated standard **14**.

[0061] In use, the debris chute assembly **10** is assembled as described and debris from construction work or the like is fed through apertures **52** of hopper wall members **50** to be dropped into a desired location below the debris chute assembly **10**. A dumpster or similar may be positioned below the debris chute assembly **10** to contain the dropped debris.

[0062] Referring now to FIGS. **15-25**, there is shown a second embodiment of a debris chute assembly in accordance with the present disclosure, with the debris chute assembly being generally indicated at **110**. The debris chute assembly **110** includes a scaffold **112** and a plurality of wall members **130** which are engaged with the scaffold **112**. The scaffold **112** is substantially identical in structure and function to scaffold **12** and will therefore not be described in much further detail herein. Scaffold **112** includes a plurality of standards **114** and a plurality of ledgers **122**, which are substantially identical in structure and function to the plurality of standards **14** and the plurality of ledgers **22** of scaffold **12**, respectively. In particular, the standards **114** are laterally and longitudinally spaced from one another and extend vertically between a top end and a bottom end of the scaffold **112**. Each ledger **122** is coupled to and extends horizontally between a pair of adjacent standards **114** of the plurality of standards **114**. The ledgers **122** are spaced a vertical distance from one another along the standards **114** and are thereby arranged in a plurality of levels similar to the levels **24** of the debris chute assembly **10**. The wall members **130** engage the ledgers **122** and standards **114** to form the debris chute assembly **110**, as will be described in greater detail hereafter. A channel **120** is bounded and defined by the wall members **130** and the channel **120** extends from proximate the top end of the scaffold **112** to proximate a bottom end of the scaffold **112**.

[0063] Referring now to FIG. **15**, debris chute assembly **110** includes a first standard **114A**, a second standard **114B**, a third standard **114C**, and a fourth standard **114D** which are oriented laterally and longitudinally relative to one another so as to form a generally square shape when debris chute assembly **110** is viewed from above. The standards **114A**, **114B**, **114C**, **114D** are arranged substantially parallel to one another and are vertically oriented when debris chute assembly **110** has been constructed.

[0064] Each one of the plurality of ledgers **122** extends between at least two of the first standard **114A**, second standard **114B**, third standard **114C** or fourth standard **114D**. In particular, each ledger **122** extends between two adjacent standards **114** such that at any horizontal level of standards in scaffold **112**, there are four ledgers which are arranged in opposed pairs. Referring to FIG. **15**, the plurality of ledgers **122** includes a first set of ledgers **122A**, **122B**, **122C**, **122D** which together comprise a first level **124A** of ledgers, and a second set of ledgers **122E**, **122F**, **122G**, **122H** which comprise a second level **124B** of ledgers. It will be understood that the debris chute assembly **110** includes any number of sets of ledgers which are arranged in any number of levels as dictated by the use of debris chute assembly **110**.

[0065] Debris chute assembly **110** further includes a plurality of wall members **130** which are engaged with scaffold **112**. As shown in FIG. **15**, four wall members **130A**, **130B**, **130C**, and **130D** are engaged with the first set ledgers **122A**, **122B**, **122C**, **122D**, respectively, of the first level **124A** of ledgers **122** in the scaffold **112**. Each one of the plurality of wall members **130** is engaged with one of the ledgers **122** which extends between an adjacent two of the first standard **114A**, second standard **114B**, third standard **114C** and fourth standard **114D**. It will be understood that wall members are not engaged with every level of ledgers in debris chute assembly **110**. FIG. **1** shows that every alternating level of ledgers **122** is free of any engagement with any wall members FIG. **15** shows that every level of ledgers **122** is engaged with four wall members **130**. The engagement of wall members **130** with each level of ledgers **122** will be determined by the situation in which the debris chute assembly **110** is to be used.



[0066] Referring now to FIG. 15, the plurality of wall members **130** which removably engages the scaffold **112** includes a plurality of first wall members **130A**, **130C**, **130D** and at least one second wall member **130B**. The first wall members **130A**, **130C**, **130D** are of substantially identical configuration and the at least one second wall member **130B** is of a different configuration from the first wall members. The at least one second wall member **130B** is also referred to herein as a hopper wall member.

[0067] Referring now to FIGS. 16 and 17, the first wall member **130A** is shown in greater detail. (It will be understood that first wall members **130C**, **130D** are substantially identical in structure and function to first wall member **130A** and the description of first wall member **130A** applies equally to wall members **130C**, **130D**.)

[0068] First wall member **130A** includes a wall panel **134**, a hook or connector **140**, and a wall flange **142**. The wall panel **134** has an outer surface **134A** and an inner surface **134B** located opposite one another. The wall panel **134** also includes a top **134C** and a bottom **134D** located opposite one another, and a first side **134E** and a second side **134F** located opposite one another.

[0069] The connector **140** is integral with or coupled to wall panel **134** proximate the top **134C** of wall panel **134**. The connector **140** extends outwardly from the outer surface **134A** of the wall panel **134**. The connector **140** includes a first leg **140A** and a second leg **140B**. The first leg **140A** extends outwardly from the outer surface **134A** at the top **134C** of the wall panel **134**. In one embodiment, the first leg **140A** is oriented perpendicular to the outer surface **134A**. The second leg **140B** extends downwardly from the end of first leg **140A**, such that the first leg **140A** and the second leg **140B** are arranged generally to form an L-shape. In one embodiment, the second leg **140B** is oriented substantially perpendicular to the first leg **140A**. An inner surface (not numbered) of the first leg **140A**, the inner surface (not numbered) of the second leg **140B**, and the outer surface **134A** of the wall panel **134** together define a passageway **140C**. The passageway **140C** is configured to receive one of the plurality of ledgers **122** therein when the wall member **130** is to be engaged with the ledger **122**. In one embodiment, the dimensions of the passageway **140C** are complementary to the dimensions of the ledger **122** to be received therein. Connector **140** has an overall length measured from a first side **140'** to a second side **140''** thereof. The first side **140'** is proximate the first side **134E** of the wall panel **134**. The second side **140''** is proximate the second side **134F** of the wall panel **134**. In one embodiment, the overall length of connector **140** is in the range of about 31 inches up to about 67 inches.

[0070] In accordance with an aspect of the present disclosure, at least one attachment member **141** extends outwardly from an outer surface (not numbered) of the first leg **140A** of the connector **140**. In one specific embodiment, at least one attachment member **141** is an eyebolt. The at least one attachment member **141** includes a shaft **141A** and an eye **141B** operably engaged with the shaft **141A**. The shaft **141A** is orthogonal to an outer surface (not numbered) of the connector **140**. Specifically, shaft **141A** is orthogonal to the outer surface (not numbered) of the first leg **140A** of the connector **140**. Shaft **141A** is parallel to the outer surface **134A** of the wall panel **134**. In one embodiment, a single attachment member **141** is located approximately midway between the first side **140'** and the second side **140''** of the connector **140**. It will be understood, however, that the attachment member **141** may be provided at any desired location on connector **140** and that more than a single attachment member **141** may be provided on connector **140** at any suitable or desired locations. The purpose of attachment member **141** will be discussed later herein.

[0071] Referring still to FIGS. 16 and 17, the wall flange **142** provided on wall panel **134** is integral with or coupled to one of the first side **134E** and the second side **134F** of the wall panel **134**. As illustrated in FIG. 16, wall flange **142** extends outwardly from the second side **134F** of the wall panel **134**. Wall flange **142** includes a first surface **142A** and a second surface **142B** opposite one another. Wall flange **142** further includes a top **142C** and a bottom **142D** opposite one another. Wall flange **142** further includes a first side **142E** and a second side **142F** opposite one another. The first surface **142A** and second surface **142B** of the wall flange **142** are substantially continuous with

the outer surface **134A** and the inner surface **134B** of the wall panel **134**, respectively. The top **142C** and the bottom **142D** of the wall flange **142** are substantially aligned with the top **134C** and bottom **134D** of the wall panel **134**, respectively. First side **142E** of wall flange **142** is continuous with second side **134F** of wall panel **134** and second side **142F** of wall flange **142** is spaced a distance away from second side **134F** of wall panel **134**. It will be understood that in other embodiments, top **142C** and/or bottom **142D** of wall flange **142** may be recessed a distance inwardly from top **134C** and/or bottom **134D** of wall panel **134**, respectively. Additionally, it should be understood that wall flange **142** may comprise a plurality of smaller wall flanges that are spaced vertically from one another along second side **134F** of wall panel **134** (or along first side **134E** of wall panel **134**).

[0072] It will be understood that if wall flange **142** extends outwardly from first side **134E** of wall panel **134**, then second side **134F** of wall panel **134** will be free of wall flange **142**. Similarly, it will be understood that if wall flange **142** extends outwardly from second side **134F** of wall panel **134**, then first side **134E** is free of wall flange **142**.

[0073] It should be noted that in other embodiments, a wall flange may extend outwardly from each of the first side **134E** and second side **134F** of wall panel **134**.

[0074] As best seen in FIG. 17, wall flange **142** is arranged at an angle “ $\alpha$ ” relative to the wall panel **134**, where the angle “ $\alpha$ ” is measured between the second surface **142B** of the wall flange **142** and the inner surface **134B** of the wall panel **134**.

[0075] In one embodiment, the angle “ $\alpha$ ” is greater than 90 degrees. In one embodiment, angle “ $\alpha$ ” is between 95-155 degrees. More specifically, angle “ $\alpha$ ” is between 110-140 degrees. Most specifically, angle “ $\alpha$ ” is about 125 degrees.

[0076] In accordance with an aspect of the present disclosure, at least one fastener **144** extends outwardly from the wall flange **142**. In one specific embodiment, at least one fastener **144** is an eyebolt. The at least one fastener **144** includes a shaft **144A** and an eye **144B** operably engaged with the shaft **144B**. The shaft **144A** is orthogonal to the first surface **142A** of the wall flange **142**. In one embodiment, the at least one fastener **144** extends outwardly from the first surface **142A** of the wall flange **142**. As illustrated in FIG. 16, a single fastener **144** extends outwardly from the first surface **142A** of wall flange **142** at a location closer to the bottom **142D** of the wall flange **142** than to the top **142C** thereof. It will be understood that in other embodiments, the fastener **144** may be provided at any desired location along the wall flange **142**. In yet other embodiments, more than a single fastener **144** may extend outwardly from wall flange at any desired locations. The purpose of fastener **144** will be discussed later herein.

[0077] The wall member **130** has an overall length (not numbered) measured from a first side **134E** of wall panel **134** to a second side **142F** of wall flange **142**. In one specific embodiment, the overall length of the wall member **130** may be in the range of about 32 inches to about 66 inches. The wall member **130** has an overall height (not numbered) measured from the top **134C** of wall panel **134** to the bottom **134D** of wall panel **134**. In one specific embodiment, the overall height of the wall member **130** may be about 44 inches.

[0078] Referring now to FIGS. 15 and 18-21, the at least one second wall member **130B** utilized in debris chute assembly **110** is identical to first wall member **130A** except for the specific features discussed hereafter. Unlike the first wall member **130A**, the at least one second wall member **130B** defines an aperture **152** (FIG. 19) in the wall panel **134**. The aperture **152** extends from outer surface **134A** to inner surface **134B** of wall panel. The aperture **152** is spaced a distance inwardly from each of the top **134C**, bottom **134D**, first side **134E**, and second side **134F** of wall panel **134**. When the at least one second wall member **130B** is engaged on scaffold **112**, the aperture **152** is placed in fluid communication with the channel **120** defined in debris chute assembly **110**.

[0079] The second wall member **130B** further includes a sheet **153** secured to the wall panel **134** by a securement mechanism **153A**. The sheet **153** is located so as to cover the aperture **152**. The sheet **153** selectively allows access to the aperture **152**, as will be discussed more fully later herein. In

one embodiment, the sheet **153** is comprised of a flexible material. The flexible material may be a rubber sheet with slits cut therethrough to allow for access to the channel **120** of the debris chute assembly **110**. Sheet **153** allows a user to insert debris into the channel **120** in the chute **110** but simultaneously aids in preventing debris within the channel **120** or dust from that debris from escaping from the channel **120** of the debris chute assembly **110**.

[0080] Referring now to FIGS. **20** and **21**, the debris chute assembly **110** further includes a door **154** which is located so as to selectively restrict access to the aperture **152** defined in at least one second wall member **130B**. The door **154** is pivotable between a closed position (FIG. **15**) and an open position (FIG. **25**). When in the open position (FIG. **25**), a user is allowed access to the channel **120** (FIG. **15**) of the debris chute assembly **110** through the aperture **152**. The door **154** is biased to the closed position or is self-closing to block access to the aperture **152** and to prevent the door **154** from being accidentally left open.

[0081] Referring to FIGS. **20** and **21**, the door **154** includes a frame **154A** and a panel **154B**. The frame **154A** provides strength to the door **154**. The panel **154B** engages with the frame **154A** and is configured to cover and inhibit access to the aperture **152** and sheet **152** when the door **154** is in the closed position.

[0082] As illustrated in FIG. **20**, panel **154B** defines a plurality of holes **154C** extending through the panel **154B**. It will be understood that panel **154B** may alternatively have any size or shape holes, cavities, depressions, cutouts, wells, apertures, or pockets extending therethrough or extending partially therethrough. It will also be understood that panel **154B** may alternatively be substantially continuous and free of any holes **154C**.

[0083] The door panel **154B** has an overall length measured from a first side (not numbered) to a second side (not numbered) of the panel. In one embodiment, the overall length of the panel **154B** may be from about 38 inches up to about 63 inches. The door panel **154B** has an overall height measured from the top (not numbered) to a bottom (not numbered) of the panel **154B**. In one specific embodiment, the overall height of the panel **154E** may be about 23 inches.

[0084] Referring to FIGS. **20** and **21**, the door **154** further includes at least one shaft **154D** extending outwardly from the frame **154A**. In one specific embodiment, the at least one shaft **154D** may include a spring or another component that will bias the door **154** to the closed position. Then the door **154** is in the closed position, access to the channel **120** of the debris chute assembly **110** is restricted. It will also be understood that the at least one shaft **154D** may be covered in an outer material which prevents debris from interfering with the operation of the door **154** and prevents the door **154** from being biased to the closed position.

[0085] The door **154** further includes at least one securement mechanism **155** which is provided on the door **154** to selectively secure the door **154** to one of the plurality of standards **114** (FIG. **15**) located in the general vicinity of the aperture **152** defined in the second wall member **130B**. The securement mechanism **155** comprises a base **155A** and a cuff **155B**. The base **155A** extends outwardly from a free end of the at least one shaft **154E**. In one specific embodiment, the cuff **155A** is a u-shaped member. Cuff **155B** engages the base **155A** via a hinge **155C**. The cuff **155B** is moveable relative to the base **155A** via the hinge **155C** and is movable between an open position and a closed position as indicated by arrow "A" in FIG. **21**. When cuff **155B** is in the closed position, an aperture **155D** (FIG. **20**) is defined between an interior surface of the base **155A** and an interior surface of the cuff **155B**. The aperture is of shape and size substantially complementary to a cross section of the standard **114** of the scaffold **112**. When the cuff **155B** is moved to the open position, one of the plurality of standards **114** is partially receivable into the aperture defined between base **155A** and cuff **155B**. When one the plurality of standards **114** is partially received within the aperture, the cuff **155B** is then rotated to the closed position via the hinge **155C** and the one of the plurality of standards **114** is thereby captured between the base **155A** and the cuff **155B**. When the cuff **155B** is in the closed position a locking mechanism **155E** provided on the securement mechanism **155** is activated and locks the base and the cuff to one another and thereby

secures the securement mechanism **155** to the standard **114**. In one specific embodiment, the screw is a wing bolt or a finger screw. The wing bolt or finger screw is finger tightenable. In other words, the securement mechanism **155** can be engaged with the scaffold **112** without the use of manufactured tools such as a wrench or screwdriver. The locking mechanism **155E** is rotatable in a first direction to lock the cuff **155C** to the base **155A** and is rotatable in a second direction to release cuff **155C** from base **155A**.

[0086] It will be understood that in alternative embodiments, the locking mechanism **155E** may be activated and deactivated with the use of manufactured tools, such as a wrench or screwdriver.

[0087] Referring to FIG. **15**, it will be noted that when debris chute assembly **110** is assembled, the inner surfaces of the wall panels **134** and the flanges **142** of the plurality of wall members **130** together bound and define the channel **120** of the debris chute assembly **110**.

[0088] Having now described the structure of the debris chute assembly **110**, a method of assembling and utilizing debris chute assembly **110** will now be described.

[0089] Although not specifically illustrated herein, it will be understood that the scaffold **112** is assembled by placing a plurality of rosettes **126** at desired intervals along the length of each of the plurality of standards **114**. The rosettes **26** are placed at the same intervals on each standard **114** of the plurality of standards **114** such that when the standards **114** are moved to the vertical position (similar to that shown in FIG. **13**), groupings of four rosettes **26** will be horizontally aligned with one another across the four standards **114**. The method of assembly of the scaffold **112** further includes positioning the plurality of standards **114** a distance longitudinally and laterally from one another and then sequentially securing the plurality of ledgers **122** between adjacent standards **114**. As discussed with respect to the first embodiment debris chute assembly **10**, each ledger **122** includes wedge blocks affixed at a first and second end of the ledgers **122**. Each ledger **122** includes wedge pins **128** extending outwardly from the ledgers **122** at the wedge blocks and are engaged with associated rosettes **126** until the skeleton of the scaffold **112** is formed. Scaffold **112** will resemble the scaffold **12** shown in FIG. **13** when assembled.

[0090] Referring now to FIG. **22**, once the plurality of standards **114** and the plurality of ledgers **122** are assembled into the scaffold **112**, each wall member **130** of the plurality of wall members **130** is individually moved into engagement with a portion of the scaffold **112**. In order to engage an individual wall member **130**, a free end of a line “L” (or wire) is engaged with the attachment member **141** extending outwardly from connector **140** on wall member **130**. The opposite end of the line “L” is attached to any type of equipment suitable to assist in lifting and placing the wall members **130** onto the scaffold **112**. One suitable piece of equipment for this purpose is a crane. The wall member **130** is suspended from the crane via the line “L” and the crane is used to raise and manipulate the wall member **130** via line “L”. Using the crane, the user lowers the individual wall member **130** onto a portion of the scaffold **112** or a selected ledger **122** on the scaffold **112** in the direction indicated by arrow “B” (FIG. **22**) utilizing line “L”. In particular, the line “L” is used to control and place the connector **140** on the wall member **130** over one of the ledgers **122** of the scaffold **112**. The line “L” is used to hold the wall member **130** in a suitable location relative to the selected ledger **122** so that the user is able to use both their hands to align the passageway **140A** defined by connector **140** with the portion of the scaffold **112** or the ledger **122** and ensure that the ledger **122** is received in the aligned passageway **140A**. The line “L” is then used to lower the wall member **130** relative to ledger **122** so that wall member **130** is suspended from the portion of the scaffold **112** or the selected ledger **122**. Once wall member **130** is so suspended, line “L” is disconnected from wall member **130** and is connected to a next one of the wall members of the plurality of wall members **130**. The first wall members **130** to be engaged with scaffold **112** are preferably engaged with the lowermost ledgers **122** of the scaffold **112**, i.e., those closest to the bottom of the scaffold **112**. The line “L” allows the user to lower and guide the wall members **130** into position onto the scaffold **112** without the user having to physically lift and move the wall members **130** into place using their hands. In some situations, the scaffold **112** may be placed on

the side of a building during the construction or refurbishment of the building. Therefore, it is helpful and safer to have the ability to utilize equipment to lift and position the wall members **130** via the line “L” instead of the user having to try and hold and manipulate the wall members **130** a distance outwardly away from the building.

[0091] It will be understood that the user can install as many first wall members **130A** or as many of the second wall members **130B** in the lowermost grouping of wall members **130** as is required by the specific situation at the construction site. As the first wall members **130A** or the second wall members **130B** are installed they are lowered onto another portion of the scaffold **112** and the another portion of the scaffold **112** is received within the passageway **140A** to allow for the first wall members **130A** or the second wall members **130B** to hand from the another portion of the scaffold **112**.

[0092] As best seen in FIG. **24**, during assembly of the debris chute assembly **110**, adjacent wall members **130'**, **130''** are oriented orthogonal to one another. The first side **134E** of one wall panel **134** of wall member **130'** is placed proximate the second side **142F** of the wall flange **142** of the adjacent wall member **130''** the plurality of wall members **130**. Once each of the wall members **130'**, **130''** are placed or lowered onto the associated ledgers **122** of the scaffold **112**, the associated line “L” will be removed from the attachment member **141** of the associated wall member **130**. Each wall member **130** is then removeable secured to another portion of the scaffold **112** or the associated standard **114** by threading a tie wire **115** through the fastener **144** on the wall flange **142** of the associated wall member **130**. The tie wire **115** is then looped around another portion of the scaffold **112** or around the adjacent standard **114** as illustrated in FIG. **23**. The tie wire **115** is of a size and material suitable to secure the wall member **130** to the standard **114** while allowing for minimum movement of the wall member **130** relative to the standard. As best seen in FIG. **24**, as tie wire **115** is tightened around the another portion of the scaffold **112** or around each of the plurality of standards **114**, the second side **142F** of flange **142** of wall member **130''** frictionally engages the inner surface **134B** of the abutting wall member **130'** and thereby secures the first side **130E** of the wall member **130'** to the scaffold **112**. The arrangement also ensures there are relatively minimal gaps between adjacent wall members **130'**, **130''**.

[0093] It will be understood that tie wire **115** may be installed onto scaffold **112** without the use of manufactured tools such as a wrench or screwdriver, meaning that tie wire **115** can be installed with only the user's hands. The use of only the tie wire **115** to the tighten the wall member **130** to the scaffold **112** is beneficial as it is simple to install (or later remove) and requires fewer components for secure installation of the wall members **130** on scaffold **112**.

[0094] It will be understood that in alternative embodiments, the tie wire **115** may be installed with the use of manufactured tools, such as a wrench or screwdriver.

[0095] When one of the second wall members **130B** is lowered by line “L” onto an associated ledger **122**, as is illustrated in FIG. **22**, and is subsequently secured to the scaffold **112** by a tie wire **115**, door **154** will be moved towards second wall member **130B** in the direction indicated by arrow “C” in FIG. **22**. In particular, the door **154** will be moved into a suitable position to align with aperture **152** and sheet **153**. When door **154** is suitably positioned, the securement mechanism **155** is operatively engaged with the adjacent standard **114** in order to hold the door **154** in the correct position relative to the aperture **152**. The door **154** is secured to the scaffold **112** by moving the at least one cuff **155C** into the open position, capturing the standard **114** between the cuff **155C** and base **155A**, and then moving the cuff **155C** into the closed position via the hinge **155B**. The cuff **155C** is then locked to the base **155A** via the locking mechanism **155E**. As illustrated in FIG. **21**, the locking of the cuff **155C** and base **155A** together may be accomplished by rotating the locking mechanism **155E**.

[0096] After all of the wall members **130** required for debris chute assembly **10** have been positioned onto scaffold **112** and have been secured in placed, debris chute assembly **10** is ready for use. Referring now to FIG. **25**, the debris chute assembly **110** is shown in use where a user opens

the door **154** in a first direction indicated by arrow “E”. The user then places debris “D” into the channel **120** of debris chute assembly **110** by moving the debris “D” through the sheet **153** and the aperture **152** defined by the wall panel **134** in the direction indicated by arrow “F”. Door **154** may then be returned to the closed position by moving the door in a second direction indicated by arrow “E”. (This closing of the door **154** may be accomplished by the user pushing the door closed or the door may automatically moved to the closed position because the door **154** is biased to do this.) The debris “D” put into channel **120** then drops downwardly through the channel **120** and into a receptacle (not shown) placed beneath the lowermost wall members **130** of the debris chute assembly.

[0097] It will be understood that in order to disassemble the debris chute assembly **110**, the steps set out above will simply be reversed.

[0098] It should be noted that utilizing the attachment members **141** and a line “L” makes it easy for a user to raise, lower, and otherwise manipulate the wall members **130** during the assembly and disassembly of the debris chute assembly **110**. Furthermore, utilizing the fasteners **144** and the tie wires **115** helps to firmly secure the wall members **130** to the scaffold standards **114**, helps to cause the wall panels **130** to help retain each other in place against the scaffold **112**, and closes off gaps between adjacent wall members **130** that could allow air to flow into the channel **120** and cause movement between the wall members **130**. The tie bolts **144** and wires **115** help increase the stability of the debris chute assembly **110** by firmly securing the wall members **130** to the standards **114** of the scaffold **112**.

[0099] Referring now to FIGS. **26-33**, there is shown a third embodiment of a debris chute assembly in accordance with the present disclosure, with the debris chute assembly being generally indicated at **210**. The debris chute assembly **210** includes a scaffold **212** and a plurality of wall members **230** which are engaged with the scaffold **212**. The scaffold **212** is substantially identical in structure and function to scaffold **12** of the first embodiment debris chute assembly **10** and to scaffold **112** of the second embodiment debris chute assembly **110** and will therefore not be described in much further detail herein. Scaffold **212** includes a plurality of standards **214**, which are substantially identical in structure and function to the plurality of standards **14** of the first embodiment debris chute assembly **10**, and to the plurality of standards **114** of the second embodiment debris chute assembly **110**. Scaffold **212** further includes a plurality of ledgers **222** which are engageable with the plurality of standards **214**. The ledgers **222** are substantially identical in structure and function to the ledgers **22** of the first embodiment debris chute assembly **10**, and to the ledgers **122** of the second embodiment debris chute assembly **110**. In particular, the standards **214** of the scaffold **212** are laterally and longitudinally spaced from one another and extend vertically between a top end and a bottom end of the scaffold **212**. Each ledger **222** is coupled to and extends horizontally between a pair of adjacent standards **214** of the plurality of standards **214**. The ledgers **222** are spaced a vertical distance from one another along the height of the standards **214** and are thereby arranged in a plurality of levels similar to the levels **24** of the first embodiment debris chute assembly **10**. The wall members **230** of the scaffold **212** are selectively engaged with the ledgers **222** and standards **214** to form the debris chute assembly **210**, as will be described in greater detail hereafter. A channel **220** is bounded and defined by the wall members **230** and the channel **220** extends from proximate the top end of the scaffold **212** to proximate a bottom end of the scaffold **212**. The channel **220** is configured to allow passage of debris through the debris chute assembly **210**.

[0100] Referring now to FIG. **26**, debris chute assembly **210** includes a first standard **214A**, a second standard **214B**, a third standard **214C**, and a fourth standard **214D** which are oriented laterally and longitudinally relative to one another so as to form a generally square shape when debris chute assembly **210** is viewed from above. The standards **214A**, **214B**, **214C**, **214D** are arranged substantially parallel to one another and are vertically oriented when debris chute assembly **210** has been constructed.

[0101] Each ledger **222** of the plurality of ledgers **222** extends between two of the first standard **214A**, second standard **214B**, third standard **214C** or fourth standard **214D**. In particular, each ledger **222** extends between two adjacent standards **214** such that at any horizontal level of the standards **214** in scaffold **212**, there are four ledgers which are arranged in opposed pairs. Referring to FIG. **26**, as illustrated the plurality of ledgers **222** in scaffold **212** includes a first set of four ledgers (not numbered) which together comprise a first level **224A** of ledgers, a second set of four ledgers (not numbered) which comprise a second level **224B** of ledgers, third set of four ledgers (not numbered) which together comprise a third level **224C** of ledgers, and fourth set of four ledgers (not numbered) which together comprise a fourth level **224D** of ledgers in the scaffold **212**. It will be understood that the debris chute assembly **210** includes any number of sets of ledgers which are arranged in any number of levels as dictated by the application of debris chute assembly **210**.

[0102] As indicated earlier herein, debris chute assembly **210** further includes a plurality of wall members **230** which are selectively engaged with scaffold **212**. As shown in FIG. **26**, four wall members **230A**, **230B**, **230C** and **230D** are engaged with the first set of four ledgers of the first level **224A** of ledgers **222** in the scaffold **212**. Each one of the plurality of wall members **230** is engaged with one of the ledgers **222** which extends between an adjacent two of the first standard **214A**, second standard **214B**, third standard **214C** and fourth standard **214D**. It will be understood that wall members may not be engaged with every level of ledgers in debris chute assembly **210**. By way of example only, in the scaffold **12** shown in FIG. **1**, every alternating level of ledgers **122** is free of any engagement with any wall members **30**. By way of further example only, in the scaffold **112** shown in FIG. **15**, every level of ledgers **122** is engaged with four wall members **130**. By way of example, only, in the scaffold **212** shown in FIG. **26**, the fourth level **224D** of the ledgers **222** is free of any engagement with any wall members **230** but in each of the first level, second level and third level of ledgers **222**, all four ledgers **222** are engaged with wall members **230**. The engagement of wall members **230** (or non engagement of wall members **230**) with each level of ledgers **222** will be determined by the particular application in which the debris chute assembly **210** is to be used.

[0103] Referring still to FIG. **26**, the plurality of wall members **230** which removeably engage the ledgers **222** of scaffold **212** includes wall members **230A**, **230B**, **230C**, and **230D**. The wall members identified with the reference numbers **230A** and **230C** are substantially identical in configuration to one another and will be referred to hereafter as “first wall members”. The wall member **230B** is of a different configuration to that of the first wall members **230A** and **230C**, and will hereafter be referred to as a “second wall member” or a “hopper wall member”. The second wall member **230B** differs from the first wall members **230A** and **230C** in that the second wall member **230B** defines an aperture therein and includes a door which provides access to channel **220** therethrough. The wall member **230D** is of a different configuration relative to the first wall members **230A** and **230C**, and to the second wall member **230B**. The wall member **230D** will be referred to hereafter as a “third wall member”. The first wall members **230A**, **230C**; and the second wall member **230B**, and the third wall member **230D** will be discussed in greater detail later herein.

[0104] It will be understood that each level of scaffold **212** may include zero, one, or more than one wall member **230** which is of the configuration of first wall members **230A** and **230C**. It will further be understood that each level of scaffold **212** may include zero, one, or more than one wall member **230** which is configured as second wall member **230B**. It will further be understood that each level of scaffold **212** may include zero, one, or more than one wall member **230** which is configured as third wall member **230D**.

[0105] Referring to FIGS. **27** and **28**, the first wall member **230A** is shown in greater detail. (It will be understood that first wall member **230C** is substantially identical in structure and function to first wall member **230A** and the description of first wall member **230A** applies equally to wall member **230C**.)

[0106] First wall member **230A** includes a wall panel **234**, a hook or connector **240**, a first wall flange **242**, and a second wall flange **243**. The wall panel **234** has an outer surface **234A** and an inner surface **234B** located opposite one another. The wall panel **234** also includes a top **234C** and a bottom **234D** located opposite one another, and a first side **234E** and a second side **234F** located opposite one another. The connector **240** is integral with or coupled to wall panel **234** proximate the top **234C** of wall panel **234**. The connector **240** extends outwardly from the outer surface **234A** of the wall panel **234**. The connector **240** includes a first leg **240A** and a second leg **240B**. The first leg **240A** extends outwardly from the outer surface **234A** at the top **234C** of the wall panel **234**. In one embodiment, the first leg **240A** is oriented perpendicular to the outer surface **234A**. The second leg **240B** extends downwardly from the end of first leg **240A**, such that the first leg **240A** and the second leg **240B** are arranged generally to form an L-shape. In one embodiment, the second leg **240B** is oriented substantially perpendicular to the first leg **240A**. An inner surface (not numbered) of the first leg **240A**, the inner surface (not numbered) of the second leg **240B**, and the outer surface **234A** of the wall panel **234** together define a passageway **240C**. The passageway **240C** is configured to receive one of the plurality of ledgers **222** therein when the wall member **230** is engaged with the ledger **222**. In one embodiment, the dimensions of the passageway **240C** are complementary to the dimensions of the ledger **222** to be received therein. Connector **240** has an overall length measured from a first side **240'** of connector **240** to a second side **240''** thereof. The first side **240'** of connector **240** is proximate the first side **234E** of the wall panel **234**. The second side **240''** of connector **240** is proximate the second side **234F** of the wall panel **234**.

[0107] In accordance with an aspect of the present disclosure, at least one attachment member **241** extends outwardly from an outer surface (not numbered) of the first leg **240A** of the connector **240**. The attachment member **241** is used during assembly of scaffold **212** in a substantially identical manner to the attachment member **141** shown in FIG. **22** and described earlier herein.

[0108] The at least one attachment member **241** includes a bracket **241A** integrally engaged with or coupled to the outer surface of the first leg **240A** of the connector **240**. The bracket **241A** and the outer surface of the first leg **240A** of the connector **240** define an opening **241B** therebetween. The at least one fastener **241** further includes a ring **241C** extending through the opening **241B**. In one embodiment, a single attachment member **241** is located approximately midway between the first side **240'** and the second side **240''** of the connector **240**. It will be understood, however, that the attachment member **241** may be provided at any desired location on connector **240** and that more than a single attachment member **241** may be provided on connector **240**. If more than one attachment member **241** is provided on connector **240**, the attachment members **241** may be provided at any suitable and desired locations on connector **240**.

[0109] Referring still to FIGS. **27** and **28**, the first wall flange **242** provided on wall panel **234** is integral with or coupled to first side **234E** of the wall panel and second wall flange **243** is integral with or coupled to the second side **234F** of the wall panel **234**. It will be understood that first wall flange **242** is substantially identical in structure and function to second wall flange **243** and the description of second wall flange **243** applies equally to first wall flange **242**.

[0110] Wall flange **243** includes a first surface **243A** and a second surface **243B** opposite one another. Wall flange **243** further includes a top **243C** and a bottom **243D** opposite one another. Wall flange **243** further includes a first side **243E** and a second side **243F** opposite one another. The first surface **243A** and second surface **243B** of the wall flange **243** are substantially continuous with the outer surface **234A** and the inner surface **234B** of the wall panel **234**, respectively. The top **243C** and the bottom **243D** of the wall flange **243** are substantially aligned with the top **234C** and bottom **234D** of the wall panel **234**, respectively. First side **243E** of wall flange **243** is continuous with second side **234F** of wall panel **234** and second side **243F** of wall flange **243** is spaced a distance away from second side **234F** of wall panel **234**. It will be understood that in other embodiments, top **243C** and/or bottom **243D** of wall flange **243** may be recessed a distance inwardly (or outwardly) from top **234C** and/or bottom **234D** of wall panel **234**, respectively. Additionally, it



should be understood that wall flange **243** may comprise a plurality of smaller wall flanges that are spaced vertically from one another along second side **234F** of wall panel **234**.

[0111] As best seen in FIG. **28**, wall flange **243** is arranged at an angle “ $\beta$ ” relative to the wall panel **234**, where the angle “ $\beta$ ” is measured between the second surface **243B** of the wall flange **243** and the inner surface **234B** of the wall panel **234**.

[0112] In one embodiment, the angle “ $\beta$ ” is greater than 90 degrees. In one embodiment, angle “ $\beta$ ” is between 105-165 degrees. More specifically, angle “ $\beta$ ” is between 120-150 degrees. Most specifically, angle “ $\beta$ ” is about 135 degrees.

[0113] In accordance with an aspect of the present disclosure, at least one fastener **244** extends outwardly from the wall flange **243**. The fastener **244** is used to secure the associated wall member **230** to a standard **214** of the scaffold **212** in a substantially identical manner to how fastener **144** is utilized for this purpose as shown in FIG. **23** and as described earlier herein.

[0114] The at least one fastener **244** includes a bracket **244A** integrally engaged with or coupled to first surface **243A** of first flange **243**. The bracket **244A** and the first surface **243A** of first flange **243** of the connector **240** define an opening **244B** therebetween. In one embodiment, a single fastener **244** is located approximately midway between the top **243C** and bottom **243D** of first flange **243**. As illustrated in FIG. **27**, a first fastener **244A** extends outwardly from the first surface **243A** of wall flange **243** at a location closer to the bottom **243D** of the wall flange **243** than to the top **243C** thereof and a second fastener **244B** extends outwardly from the first surface **243A** of wall flange **243** at a location closer to the top **243C** of the wall flange **243** than to the bottom **243D** thereof. It will be understood that in other embodiments, the fastener **244** may be provided at any location along the wall flange **243**. In yet other embodiments, more than a single fastener **244** may extend outwardly from wall flange **243** at any desired locations.

[0115] Referring now to FIGS. **26** and **31**, the at least one second wall member **230B** utilized in debris chute assembly **210** is identical to third wall member **230D** except for the specific features discussed hereafter. Unlike the third wall member **230D**, the at least one second wall member **230B** defines an aperture **252** in the wall panel **235**. The aperture **252** extends from outer surface **235A** to inner surface **235B** of wall panel. The aperture **252** is spaced a distance inwardly from each of the top **235C**, bottom **235D**, first side **235E**, and second side **235F** of wall panel **235**. When the at least one second wall member **230B** is engaged on scaffold **212**, the aperture **252** is placed in fluid communication with the channel **220** defined in debris chute assembly **210**.

[0116] The second wall member **230B** further includes a shelf **251** extending outwardly from the outer surface **235A** of the wall panel **235** proximate a bottom end (not numbered) of the aperture **252**. The shelf **251** defines a cutout **251A** extending through a portion of the shelf **251**. Cutout **251A** allows for a fastener **244** of a wall member **230** located in the level of scaffold **212** below second wall member **230B** to be accommodated therein.

[0117] The second wall member **230B** further includes a sheet **253** secured to the wall panel **235** by an appropriate securement mechanism (not shown). The sheet **253** is located so as to cover the aperture **252**. The sheet **253** selectively allows access to the aperture **252** and thereby to the channel **220**, as will be discussed later herein. In one embodiment, the sheet **253** is comprised of a flexible material. The flexible material may be a rubber sheet with slits cut therethrough to allow for access to the channel **220** of the debris chute assembly **210** through aperture **252**. The rubber sheet may be glued or otherwise secured to the wall panel **235**. Sheet **253** allows a user to insert debris into the channel **220** in the chute **210** through aperture **252** but simultaneously aids in preventing debris within the channel **220** or dust from that debris from escaping from the channel **220** of the debris chute assembly **210**.

[0118] Referring now to FIG. **26**, it is shown that the debris chute assembly **210** further includes a door **254** provided on second wall member **230B** with the door **254** being located so as to selectively restrict access to the aperture **252** defined in second wall member **230B**. Door **254** is substantially identical in structure and function to door **154** and will therefore not be described in

more detail herein.

[0119] Referring now to FIGS. **30** and **31**, third wall member **230D** is shown in greater detail.

[0120] Third wall member **230D** includes a wall panel **235**, a hook or connector **239**, a first lip **245**, and a second lip **247**. Wall panel **235** is substantially identical to wall panel **234** of first wall member **230A**. The wall panel **235** has an outer surface **235A** and an inner surface **235B** located opposite one another. The wall panel **235** also includes a top **235C** and a bottom **235D** located opposite one another, and a first side **235E** and a second side **235F** located opposite one another.

[0121] Connector **239** is substantially identical to connector **240** of first wall member **230A**.

Connector **239** includes a first leg **239A** and a second leg **239B**. An inner surface (not numbered) of the first leg **239A**, the inner surface (not numbered) of the second leg **239B**, and the outer surface **235A** of the wall panel **235** together define a passageway **239C** therebetween. The passageway **239C** is configured to receive one of the plurality of ledgers **222** therein when the third wall member **230D** is to be engaged with the ledger **222**. In one embodiment, the dimensions of the passageway **239C** are complementary to the dimensions of the ledger **222** to be received therein. Connector **239** has an overall length measured from a first side **239'** to a second side **239''** thereof. The first side **239'** is proximate the first side **235E** of the wall panel **235**. The second side **239''** is proximate the second side **235F** of the wall panel **235**.

[0122] In accordance with an aspect of the present disclosure, at least one attachment member **241** extends outwardly from an outer surface (not numbered) of the first leg **239A** of the connector **239**. The at least one attachment member **241** is identical in structure and function to the at least one attachment member **241** provided on first wall member **230A**. In accordance with an aspect of the present disclosure, the at least one attachment member **241** extends outwardly from an outer surface (not numbered) of the first leg **239A** of the connector **239** of third wall member **230D**.

[0123] Referring still to FIGS. **30** and **31**, the first lip **245** provided on wall panel **235** is integral with or coupled to the first side **235E** of the wall panel **235** and the second lip **247** provided on wall panel **235** is integral with or coupled to the second side **235F** of wall panel **235**. It will be understood that first lip **245** is substantially identical in structure and function to second lip **247** and the description of second lip **247** applies equally to first lip **245**.

[0124] Lip **247** includes a first surface **247A** and a second surface **247B** opposite one another. Lip **247** further includes a top **247C** and a bottom **247D** opposite one another. Lip **247** further includes a first side **247E** and a second side **247F** opposite one another. The first surface **247A** and second surface **247B** of the lip **247** are substantially continuous with the outer surface **235A** and the inner surface **235B** of the wall panel **235**, respectively. The top **247C** and the bottom **247D** of the lip **247** are substantially aligned with the top **235C** and bottom **235D** of the wall panel **235**, respectively. First side **247E** of lip **247** is continuous with second side **235F** of wall panel **235** and second side **247F** of lip **247** is spaced a distance away from second side **235F** of wall panel **235**. It will be understood that in other embodiments, top **247C** and/or bottom **247D** of lip **247** may be recessed a distance inwardly (or outwardly) from top **235C** and/or bottom **235D** of wall panel **235**, respectively. Additionally, it should be understood that lip **247** may comprise a plurality of smaller lips that are spaced vertically from one another along second side **235F** of wall panel **235**.

[0125] In one specific embodiment, lip **247** has an overall length measured from a first side **343E** to a second side **343F** thereof. In one embodiment, the overall length of lip **343** is about 0.5 inches.

[0126] As best seen in FIG. **23**, lip **247** is arranged at an angle " $\theta$ " relative to the wall panel **235**, where the angle " $\theta$ " is measured between the second surface **247B** of the lip **247** and the inner surface **235B** of the wall panel **235**.

[0127] In one embodiment, the angle " $\theta$ " is greater than 90 degrees. In one embodiment, angle " $\theta$ " is between 95-155 degrees. More specifically, angle " $\theta$ " is between 120-160 degrees. Most specifically, angle " $\theta$ " is about 135 degrees.

[0128] It should be noted that the angle " $\theta$ " of lip **247** on third wall member **230D** is complementary to the angle  $\beta$  of second flange **243** on first wall members **230A**, **230C** as the lip

**247** and second flange **243** will abut one another when scaffold **212** is assembled.

[0129] Referring to FIGS. **26** and **32**, it will be noted that when debris chute assembly **210** is assembled, the inner surfaces of the wall panels **234**, **235**, the flanges **242**, **243**, and the lips **245**, **247** of the plurality of wall members **230A**, **230B**, **230C**, **230D** together bound and define the channel **220** of the debris chute assembly **210**.

[0130] It will be understood that the method of assembling and utilizing debris chute assembly **210** is substantially similar to the method of assembling and utilizing debris chute assembly **110** described above and therefore will not be described in much detail hereafter other than what is described below.

[0131] Referring now to FIG. **33**, adjacent wall members **230'**, **230''** are oriented orthogonal to one another. Wall member **230'** as shown in FIGS. **26** and **33** may be either of a second wall member **230B** or a third wall member **230D**. Wall member **230''** as shown in FIGS. **26** and **33** is a first wall member **230A**. Wall flange **242** includes a first surface **242A** and a second surface **242B** opposite one another. Wall flange **242** further includes a first side **242E** and a second side **242F** opposite one another. The first surface **242A** and second surface **242B** of the wall flange **242** are substantially continuous with the outer surface **234A** and the inner surface **234B** of the wall panel **234**, respectively. First side **242E** of wall flange **242** is continuous with second side **234F** of wall panel **234** and second side **242F** of wall flange **242** is spaced a distance away from second side **234F** of wall panel **234**.

[0132] FIG. **33** shows that the second side **247F** of one of the lips **247** of the wall member **230'** is placed proximate a second side **242F** of the wall flange **242** of wall member **230''**. Once each of the wall members **230'**, **230''** is placed or lowered onto the associated ledgers **222** of the scaffold **212** using a line engaged with the attachment member **241** of the wall member **230** (similar to how wall member **130** is engaged with line "L" shown in FIG. **22**), the associated line "L" will be removed from the attachment member **241**. Each wall member **230'**, **230''** is then removeably secured to another portion of the scaffold **212** or the associated standard **214** by threading a tie wire **215** through the fastener **244** on the wall flange **242** of the associated wall member **230** in a similar manner to securement of fastener **144** on wall flange **142** illustrated in FIG. **23**. Specifically, tie wire **215** is inserted into the opening **244B** defined by the bracket **244A** and an outer surface **242A** of wall flange **242**. The tie wire **215** is then looped around another portion of the scaffold **212** or around the adjacent standard **214** as illustrated in FIG. **33**. The tie wire **215** is of a size and material suitable to secure the wall member **230** to the standard **214** while allowing for minimum movement of the wall member **230** relative to the standard. As best seen in FIG. **33**, as tie wire **215** is tightened around the portion of the scaffold **212** (i.e., the associated standard **214**), the wall flange **242** of wall member **230''** moves in the direction of arrow "G" until first surface **242A** of wall flange **242** of wall member **230''** is abuts second surface **247B** of lip **247** of the adjacent wall member **230'**.

[0133] It will be understood that tie wire **215** may be installed onto scaffold **212** without the use of manufactured tools such as a wrench or screwdriver, meaning that tie wire **215** can be installed with only the user's hands. The use of only the tie wire **215** to secure the wall member **230** to the scaffold **212** is beneficial as it is simple to install (or later remove) and requires fewer components for secure installation of the wall members **230** on scaffold **212**.

[0134] It will be understood that in alternative embodiments, the tie wire **215** may be installed with the use of manufactured tools, such as a wrench or screwdriver.

[0135] Having now described debris chute assembly **210**, a method of forming debris chute assembly **210** will be discussed.

[0136] Referring now to FIG. **26**, it be understood that the plurality of wall members **230** are installed on a level by level basis. The user first lowers either second wall member **230B** or wall member **230D** via the line "L" (substantially identical to line "L" shown in FIG. **22**) onto the fourth level **224D** of the plurality of ledgers **222**. It will be understood that the user may use any number

of second wall member **230B** or wall member **230D** as required by the application. After the second wall member **230B** or wall member **230D** are lowered onto the fourth level **224D** of the plurality of ledgers **222**, the line “L” is removed. The user may then lower first wall members **230A**, **230B** onto the fourth level **224D** of the plurality of ledgers **222** and remove the line “L”.

[0137] After the wall members **230A**, **230B**, **230C**, **230D** are lowered onto the fourth level **224D** of the plurality of ledgers **222** the user may wrap, loop, encircle tie wire **215** around the portion of the scaffold **212**, as shown in FIG. **33**, as tighten the tie wire **215**.

[0138] Again, the user lowers either second wall member **230B** or wall member **230D** via the line “L” (substantially identical to line “L” shown in FIG. **22**) onto the third level **224C** of the plurality of ledgers **222**. It will be understood that the user may use any number of second wall member **230B** or wall member **230D** as required by the application. After the second wall member **230B** or wall member **230D** are lowered onto the third level **224C** of the plurality of ledgers **222**, the line “L” is removed. The user may then lower first wall members **230A**, **230B** onto the third level **224C** of the plurality of ledgers **222** and remove the line “L”.

[0139] After the wall members **230A**, **230B**, **230C**, **230D** are lowered onto the third level **224C** of the plurality of ledgers **222** the user may wrap, loop, encircle tie wire **215** around the portion of the scaffold **212**, as shown in FIG. **33**, as tighten the tie wire **215**.

[0140] Again, the user lowers either second wall member **230B** or wall member **230D** via the line “L” (substantially identical to line “L” shown in FIG. **22**) onto the second level **224B** of the plurality of ledgers **222**. It will be understood that the user may use any number of second wall member **230B** or wall member **230D** as required by the application. After the second wall member **230B** or wall member **230D** are lowered onto the second level **224B** of the plurality of ledgers **222**, the line “L” is removed. The user may then lower first wall members **230A**, **230B** onto the second level **224B** of the plurality of ledgers **222** and remove the line “L”.

[0141] After the wall members **230A**, **230B**, **230C**, **230D** are lowered onto the second level **224B** of the plurality of ledgers **222** the user may wrap, loop, encircle tie wire **215** around the portion of the scaffold **212**, as shown in FIG. **33**, as tighten the tie wire **215**.

[0142] Lastly, the user lowers either second wall member **230B** or wall member **230D** via the line “L” (substantially identical to line “L” shown in FIG. **22**) onto the first level **224A** of the plurality of ledgers **222**. It will be understood that the user may use any number of second wall member **230B** or wall member **230D** as required by the application. After the second wall member **230B** or wall member **230D** are lowered onto the first level **224A** of the plurality of ledgers **222**, the line “L” is removed. The user may then lower first wall members **230A**, **230B** onto the first level **224A** of the plurality of ledgers **222** and remove the line “L”.

[0143] After the wall members **230A**, **230B**, **230C**, **230D** are lowered onto the first level **224A** of the plurality of ledgers **222** the user may wrap, loop, encircle tie wire **215** around the portion of the scaffold **212**, as shown in FIG. **33**, as tighten the tie wire **215**.

[0144] It will be understood that although the tire wires **215** are described as being installed after the wall members wall members **230A**, **230B**, **230C**, **230D** are installed on to the associated levels **224A**, **224B**, **224C**, **224D** of the plurality of ledgers **222**, alternatively, the user can install the wall members **230A**, **230B**, **230C**, **230D** onto each of the associated levels **224A**, **224B**, **224C**, **224D** of the plurality of ledgers **222** and then install the tire wire **215** after all of the wall members **230A**, **230B**, **230C**, **230D** are installed onto the associated levels **224A**, **224B**, **224C**, **224D** of the plurality of ledgers **222**.

[0145] Referring now to FIG. **34**, there is shown a region of a fourth embodiment of debris chute assembly, generally indicated at **310**. Debris chute assembly **310** is substantially identical in structure and function to debris chute assembly **210** and will therefore not be illustrated or described in much further detail herein. Debris chute assembly **310** includes a plurality of wall members **330'** and a plurality of wall members **330''** which are engageable with a scaffold that is substantially identical to scaffold **212**. Wall members **330'** include a wall panel **334** but do not

include any flanges such as the flanges **242**, **243** shown in FIG. 27, or lips such as lips **245**, **247** shown in FIG. 30. Wall members **330''** include wall flanges **342** extending outwardly from a first side (not shown) and a second side **334E** of a wall panel **334** substantially similar to wall flanges **242** and **243** shown in FIG. 27. Wall member **330''** include a fastener **344** extending outwardly from the flange **324**. The fastener **344** is configured to receive a tie wire **315**. Tie wire **315** is looped around a portion of a scaffold or around an adjacent standard **314** of a scaffold. As tie wire **315** is tightened around the portion of the scaffold or around the adjacent standard **314**, a second side **342F** of the flange **342** of wall member **330''** frictionally engages the first side **334E** of the abutting wall member **330'** and thereby secures the wall member **330'** to the scaffold.

[0146] It will be understood that wall member **330'** is a variant of wall member **230'** without lips.

[0147] Referring now to FIGS. 35, there is shown a fifth embodiment of a debris chute assembly in accordance with the present disclosure, with the debris chute assembly being generally indicated at **410**. The debris chute assembly **410** includes a scaffold **412** and a plurality of wall members **430** which are engaged with the scaffold **412**. The scaffold **412** is substantially identical in structure and function to scaffold **12** of the first embodiment debris chute assembly **10**, to scaffold **112** of the second embodiment debris chute assembly **110**, and to scaffold **212** of the third embodiment of the debris chute assembly **210** and will therefore not be described in much further detail herein.

Scaffold **412** includes a plurality of standards **414**, which are substantially identical in structure and function to the plurality of standards **14** of the first embodiment debris chute assembly **10**, to the plurality of standards **114** of the second embodiment debris chute assembly **110**, and the plurality of standards **214** of the third embodiment debris chute assembly **210**. Scaffold **412** further includes a plurality of ledgers **422** which are engageable with the plurality of standards **414**. The ledgers **422** are substantially identical in structure and function to the ledgers **22** of the first embodiment debris chute assembly **10**, to the ledgers **122** of the second embodiment debris chute assembly **110**, and to the ledgers **222** of the third embodiment debris chute assembly **210** and will therefore not be described in much further detail herein.

[0148] In particular, the standards **414** of the scaffold **412** are laterally and longitudinally spaced from one another and extend vertically between a top end and a bottom end of the scaffold **412**. Each ledger **422** is coupled to and extends horizontally between a pair of adjacent standards **414** of the plurality of standards **414**. The ledgers **422** are spaced a vertical distance from one another along the height of the standards **414** and are thereby arranged in a plurality of levels similar to the levels **24** of the first embodiment debris chute assembly **10** and the levels **222** of the third embodiment debris chute assembly **210**. The wall members **430** of the scaffold **412** are selectively engaged with the ledgers **422** and standards **414** to form the debris chute assembly **410**, as will be described in greater detail hereafter. A channel **420** is bounded and defined by the wall members **430** and the channel **420** extends from proximate the top end of the scaffold **412** to proximate a bottom end of the scaffold **412**. The channel **420** is configured to allow passage of debris through the debris chute assembly **410**.

[0149] Each ledger **422** of the plurality of ledgers **422** extends between two of the first standard **414A**, second standard **414B**, third standard **414C** or fourth standard **414D**. In particular, each ledger **422** extends between two adjacent standards **414** such that at any horizontal level of the standards **414** in scaffold **412**, there are four ledgers which are arranged in opposed pairs. Referring to FIG. 35, as illustrated the plurality of ledgers **422** in scaffold **242** includes a first set of four ledgers (not numbered) which together comprise a first level **424A** of ledgers, a second set of four ledgers (not numbered) which comprise a second level **244B** of ledgers, third set of four ledgers (not numbered) which together comprise a third level **424C** of ledgers, and fourth set of four ledgers (not numbered) which together comprise a fourth level **424D** of ledgers in the scaffold **412**. It will be understood that the debris chute assembly **410** includes any number of sets of ledgers which are arranged in any number of levels as dictated by the application of debris chute assembly **410**.

[0150] As indicated earlier herein, debris chute assembly **410** further includes a plurality of wall members **430** which are selectively engaged with scaffold **412**. As shown in FIG. 35, four wall members **430A**, **430B**, **430C** and **430D** are engaged with the first set of four ledgers of the first level **424A** of ledgers **422** in the scaffold **412**. Each one of the plurality of wall members **430** is engaged with one of the ledgers **422** which extends between an adjacent two of the first standard **414A**, second standard **414B**, third standard **414C** and fourth standard **414D**. It will be understood that wall members may not be engaged with every level of ledgers in debris chute assembly **210**. By way of example only, in the scaffold **12** shown in FIG. 1, every alternating level of ledgers **122** is free of any engagement with any wall members **30**. By way of further example only, in the scaffold **112** shown in FIG. 15, every level of ledgers **122** is engaged with four wall members **130**. By way of example, only, in the scaffold **212** shown in FIG. 26, the fourth level **224D** of the ledgers **222** is free of any engagement with any wall members **230** but in each of the first level, second level and third level of ledgers **222**, all four ledgers **222** are engaged with wall members **230**. By way of example, only, in the scaffold **412** shown in FIG. 35, the fourth level **424D** of the ledgers **422** is free of any engagement with any wall members **430** but in each of the first level, second level and third level of ledgers **422**, all four ledgers **422** are engaged with wall members **430**. The engagement of wall members **430** (or non engagement of wall members **430**) with each level of ledgers **422** will be determined by the particular application in which the debris chute assembly **410** is to be used.

[0151] Referring still to FIGS. 35 and 36, the plurality of wall members **430** which removeably engage the ledgers **422** of scaffold **412** includes wall members **430A**, **430B**, **430C**, and **430D**. The wall members identified with the reference numbers **430A** and **430C** are substantially identical in configuration to one another and will be referred to hereafter as “first wall members”.

[0152] It will be understood that each level of scaffold **412** may include zero, one, or more than one wall member **430** which is of the configuration of first wall members **430A** and **430C**. It will further be understood that each level of scaffold **412** may include zero, one, or more than one wall member **430** which is configured as second wall member **430B**. It will further be understood that each level of scaffold **412** may include zero, one, or more than one wall member **430** which is configured as third wall member **430D**.

[0153] First wall member **430A** is substantially identical in function and structure as first wall member **230A** and therefore will be described in more detail herein. It will be understood that any description of first wall member **230A** will equal apply to first wall member **430A**.

[0154] Wall member **430B** is a third embodiment of a second wall member **430B**. Wall member **430D** is a third embodiment of a third wall member. Wall member **430D** is substantially identical in function and structure as third wall member **230D** and therefore will be described in more detail herein. It will be understood that any description of third wall member **430D** will equal apply to third wall member **430D**.

[0155] Second wall member **430B** includes a wall panel **435**, a hook or a connector **439**, at least one attachment member **441**, a first lip **445**, and a second lip **447**. Wall panel **435** is substantially similar to wall panel **235** of third embodiment of the debris chute assembly **210** except it differs in length. Connector **439** is substantially similar to connector **239** of third embodiment of the debris chute assembly **210**. At least one attachment member **441** is substantially similar to at least one attachment member **241** of third embodiment of the debris chute assembly **210**. First lip **445** is substantially similar to first lip **245** of third embodiment of the debris chute assembly **210** except it differs in length. Second lip **447** is substantially similar to second lip **247** of third embodiment of the debris chute assembly **210** except it differs in length.

[0156] When second wall member **430B** is installed on debris chute assembly **410** as show in FIG. 35, it defines a slot **452** which will operate similar to aperture **252** of third embodiment of the debris chute assembly **210** to allow for debris to pass through to channel **420**.

[0157] It will be understood that although not pictured herein, debris chute assembly **410** may

include a sheet, similar to sheet **153** in debris chute assembly **110**, which is attached to a bottom edge of the second wall member **430B** at the slot **452** to prevent debris or dust from escaping the channel **420** defined by the debris chute assembly **410**.

[0158] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of an embodiment enabled by the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by an embodiment of the disclosure.

[0159] Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the disclosure. In this patent document, the word “comprising” is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article “a” does not exclude the possibility that more than one of the element is present, unless the context clearly required that there be only one of the elements.

[0160] Unless explicitly stated that a particular shape or configuration of a component is mandatory, any of the elements, components, or structures discussed herein may take the form of any shape. Thus, although the figures depict the various elements, components, or structures of the present disclosure according to one or more exemplary embodiments, it is to be understood that any other geometric configuration of that element, component, or structure is entirely possible. For example, instead of the plurality of standards **114** being generally square relative to one another, the markers plurality of standards **114** can be semi-circular, triangular, rectangular or square, pentagonal, hexagonal, heptagonal, octagonal, decagonal, dodecagonal, diamond shaped or another parallelogram, trapezoidal, star-shaped, oval, ovoid, lines or lined, teardrop-shaped, cross-shaped, donut-shaped, heart-shaped, arrow-shaped, crescent-shaped, any letter shape (i.e., A-shaped, B-shaped, C-shaped, D-shaped, E-shaped, F-shaped, G-shaped, H-shaped, I-shaped, J-shaped, K-shaped, L-shaped, M-shaped, N-shaped, O-shaped, P-shaped, Q-shaped, R-shaped, S-shaped, T-shaped, U-shaped, V-shaped, W-shaped, X-shaped, Y-shaped, or Z-shaped), or any other type of regular or irregular, symmetrical or asymmetrical configuration relative to one another.

[0161] Various inventive concepts may be embodied as one or more methods, of which an example has been provided. The acts performed as part of the method may be ordered in any suitable way. Accordingly, embodiments may be constructed in which acts are performed in an order different than illustrated, which may include performing some acts simultaneously, even though shown as sequential acts in illustrative embodiments.

[0162] Any flowchart and/or block diagrams in the Figures illustrate some exemplary architecture, functionality, and operation of possible implementations of systems, methods, and computer program products according to various embodiments of the present disclosure. In this regard, each block in the flowchart or block diagrams may represent a module, segment, or portion of instructions, which comprises one or more executable instructions for implementing the specified logical function(s). In some alternative implementations, the functions noted in the blocks may occur out of the order noted in the Figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved. It will also be noted that each block of the block diagrams and/or flowchart illustration, and combinations of blocks in the block diagrams and/or flowchart illustration, can be implemented by special purpose hardware-based systems that perform the specified functions or acts or carry out combinations of special purpose hardware and computer instructions.

[0163] While various inventive embodiments have been described and illustrated herein, those of ordinary skill in the art will readily envision a variety of other means and/or structures for performing the function and/or obtaining the results and/or one or more of the advantages described herein, and each of such variations and/or modifications is deemed to be within the scope of the inventive embodiments described herein. More generally, those skilled in the art will readily appreciate that all parameters, dimensions, materials, and configurations described herein are meant to be exemplary and that the actual parameters, dimensions, materials, and/or configurations will depend upon the specific application or applications for which the inventive teachings is/are used. Those skilled in the art will recognize or be able to ascertain using no more than routine experimentation, many equivalents to the specific inventive embodiments described herein. It is, therefore, to be understood that the foregoing embodiments are presented by way of example only and that, within the scope of the appended claims and equivalents thereto, inventive embodiments may be practiced otherwise than as specifically described and claimed. Inventive embodiments of the present disclosure are directed to each individual feature, system, article, material, kit, and/or method described herein. In addition, any combination of two or more such features, systems, articles, materials, kits, and/or methods, if such features, systems, articles, materials, kits, and/or methods are not mutually inconsistent, is included within the inventive scope of the present disclosure.

[0164] For example, although the device, assembly, or system of the present disclosure is described as a complete unit within the present disclosure, it is to be understood that some of the components or features detailed herein can be supplied as a retrofit kit. This approach enables the provision of only certain parts necessary to upgrade a legacy device to the specifications of device, assembly, or system of the present disclosure. Essentially, instead of requiring the replacement of the entire device, the retrofit kit allows for the selective enhancement of specific components. This could allow a user or operator to efficiently upgrade its/their existing legacy devices, systems, or assemblies to achieve the performance and functionality of the device, assembly, or system of the present disclosure without a full replacement. In the event that a component or portion of the device, assembly, or system of the present disclosure is provided as part of a retrofit kit, those components may be integrated into legacy devices, systems or assemblies to upgrade the same. By facilitating partial upgrades, it addresses the need for continuous improvement and adaptation in dynamic environments where complete replacement might be neither feasible nor necessary. As a result, a user or operator would be able to make an enhancement, thereby extending the lifecycle, optimizing, or improving those legacy devices, systems, or assemblies.

[0165] The above-described embodiments can be implemented in any of numerous ways. For example, embodiments of technology disclosed herein may be implemented using hardware, software, firmware or a combination thereof. When implemented in software, the software code or instructions can be executed on any suitable processor or collection of processors, whether provided in a single computer or distributed among multiple computers or in firmware. Furthermore, the instructions or software code can be stored in at least one non-transitory computer readable storage medium.

[0166] All definitions, as defined and used herein, should be understood to control over dictionary definitions, definitions in documents incorporated by reference, and/or ordinary meanings of the defined terms.

[0167] The articles “a” and “an,” as used herein in the specification and in the claims, unless clearly indicated to the contrary, should be understood to mean “at least one.” The phrase “and/or,” as used herein in the specification and in the claims (if at all), should be understood to mean “either or both” of the elements so conjoined, i.e., elements that are conjunctively present in some cases and disjunctively present in other cases. Multiple elements listed with “and/or” should be construed in the same fashion, i.e., “one or more” of the elements so conjoined. Other elements may optionally be present other than the elements specifically identified by the “and/or” clause, whether



related or unrelated to those elements specifically identified. Thus, as a non-limiting example, a reference to “A and/or B”, when used in conjunction with open-ended language such as “comprising” can refer, in one embodiment, to A only (optionally including elements other than B); in another embodiment, to B only (optionally including elements other than A); in yet another embodiment, to both A and B (optionally including other elements); etc. As used herein in the specification and in the claims, “or” should be understood to have the same meaning as “and/or” as defined above. For example, when separating items in a list, “or” or “and/or” shall be interpreted as being inclusive, i.e., the inclusion of at least one, but also including more than one of a number or list of elements, and, optionally, additional unlisted items. Only terms clearly indicated to the contrary, such as “only one of” or “exactly one of,” or, when used in the claims, “consisting of,” will refer to the inclusion of exactly one element of a number or list of elements. In general, the term “or” as used herein shall only be interpreted as indicating exclusive alternatives (i.e. “one or the other but not both”) when preceded by terms of exclusivity, such as “either,” “one of,” “only one of,” or “exactly one of.” “Consisting essentially of,” when used in the claims, shall have its ordinary meaning as used in the field of patent law.

[0168] As used herein in the specification and in the claims, the phrase “at least one,” in reference to a list of one or more elements, should be understood to mean at least one element selected from any one or more of the elements in the list of elements, but not necessarily including at least one of each and every element specifically listed within the list of elements and not excluding any combinations of elements in the list of elements. This definition also allows that elements may optionally be present other than the elements specifically identified within the list of elements to which the phrase “at least one” refers, whether related or unrelated to those elements specifically identified. Thus, as a non-limiting example, “at least one of A and B” (or, equivalently, “at least one of A or B,” or, equivalently “at least one of A and/or B”) can refer, in one embodiment, to at least one, optionally including more than one, A, with no B present (and optionally including elements other than B); in another embodiment, to at least one, optionally including more than one, B, with no A present (and optionally including elements other than A); in yet another embodiment, to at least one, optionally including more than one, A, and at least one, optionally including more than one, B (and optionally including other elements); etc. As another example, “at least one of: A, B, or B” is intended to cover A, B, C, A-B, A-C, B-C, and A-B-C, as well as any combination with multiple of the same item.

[0169] While components of the present disclosure are described herein in relation to each other, it is possible for one of the components disclosed herein to include inventive subject matter, if claimed alone or used alone. In keeping with the above example, if the disclosed embodiments teach the features of A and B, then there may be inventive subject matter in the combination of A and B, A alone, or B alone, unless otherwise stated herein.

[0170] As used herein in the specification and in the claims, the term “effecting” or a phrase or claim element beginning with the term “effecting” should be understood to mean to cause something to happen or to bring something about. For example, effecting an event to occur may be caused by actions of a first party even though a second party actually performed the event or had the event occur to the second party. Stated otherwise, effecting refers to one party giving another party the tools, objects, or resources to cause an event to occur. Thus, in this example a claim element of “effecting an event to occur” would mean that a first party is giving a second party the tools or resources needed for the second party to perform the event, however the affirmative single action is the responsibility of the first party to provide the tools or resources to cause said event to occur.

[0171] When a feature or element is herein referred to as being “on” another feature or element, it can be directly on the other feature or element or intervening features and/or elements may also be present. In contrast, when a feature or element is referred to as being “directly on” another feature or element, there are no intervening features or elements present. It will also be understood that,

when a feature or element is referred to as being “connected”, “attached” or “coupled” to another feature or element, it can be directly connected, attached or coupled to the other feature or element or intervening features or elements may be present. In contrast, when a feature or element is referred to as being “directly connected”, “directly attached” or “directly coupled” to another feature or element, there are no intervening features or elements present. Although described or shown with respect to one embodiment, the features and elements so described or shown can apply to other embodiments. It will also be appreciated by those of skill in the art that references to a structure or feature that is disposed “adjacent” another feature may have portions that overlap or underlie the adjacent feature.

[0172] Spatially relative terms, such as “under”, “below”, “lower”, “over”, “upper”, “above”, “behind”, “in front of”, and the like, may be used herein for ease of description to describe one element or feature's relationship to another element(s) or feature(s) as illustrated in the figures. It will be understood that the spatially relative terms are intended to encompass different orientations of the device in use or operation in addition to the orientation depicted in the figures. For example, if a device in the figures is inverted, elements described as “under” or “beneath” other elements or features would then be oriented “over” the other elements or features. Thus, the exemplary term “under” can encompass both an orientation of over and under. The device may be otherwise oriented (rotated 90 degrees or at other orientations) and the spatially relative descriptors used herein interpreted accordingly. Similarly, the terms “upwardly”, “downwardly”, “vertical”, “horizontal”, “lateral”, “transverse”, “longitudinal”, and the like are used herein for the purpose of explanation only unless specifically indicated otherwise.

[0173] Although the terms “first” and “second” may be used herein to describe various features/elements, these features/elements should not be limited by these terms, unless the context indicates otherwise. These terms may be used to distinguish one feature/element from another feature/element. Thus, a first feature/element discussed herein could be termed a second feature/element, and similarly, a second feature/element discussed herein could be termed a first feature/element without departing from the teachings of the present disclosure.

[0174] An embodiment is an implementation or example of the present disclosure. Reference in the specification to “an embodiment,” “one embodiment,” “some embodiments,” “one particular embodiment,” “an exemplary embodiment,” or “other embodiments,” or the like, means that a particular feature, structure, or characteristic described in connection with the embodiments is included in at least some embodiments, but not necessarily all embodiments, of the invention. The various appearances “an embodiment,” “one embodiment,” “some embodiments,” “one particular embodiment,” “an exemplary embodiment,” or “other embodiments,” or the like, are not necessarily all referring to the same embodiments. Furthermore, the use of any and all examples or exemplary language (“e.g.,” “such as,” or the like) is intended merely to better illustrate or illuminate the embodiments and does not pose a limitation on the scope of that or those embodiments. No language in this specification should be construed as indicating any unclaimed element as essential to the practice of the disclosed embodiment.

[0175] If this specification states a component, feature, structure, or characteristic “may”, “might”, or “could” be included, that particular component, feature, structure, or characteristic is not required to be included. If the specification or claim refers to “a” or “an” element, that does not mean there is only one of the element. If the specification or claims refer to “an additional” element or “another” element, that does not preclude there being more than one of the additional element or the another element.

[0176] As used herein in the specification and claims, including as used in the examples and unless otherwise expressly specified, all numbers may be read as if prefaced by the word “about” or “approximately,” even if the term does not expressly appear. The phrase “about” or “approximately” may be used when describing magnitude and/or position to indicate that the value and/or position described is within a reasonable expected range of values and/or positions. For

example, a numeric value may have a value that is  $\pm 0.1\%$  of the stated value (or range of values),  $\pm 1\%$  of the stated value (or range of values),  $\pm 2\%$  of the stated value (or range of values),  $\pm 5\%$  of the stated value (or range of values),  $\pm 10\%$  of the stated value (or range of values), etc. Any numerical range recited herein is intended to include all sub-ranges subsumed therein. Further, recitation of ranges of values herein are not intended to be limiting, referring instead individually to any and all values falling within that range, unless otherwise indicated herein, and each separate value within such range is incorporated into the specification as if it were individually recited herein.

[0177] Additionally, the method of performing the present disclosure may occur in a sequence different than those described herein. Accordingly, no sequence of the method should be read as a limitation unless explicitly stated. It is recognizable that performing some of the steps of the method in a different order could achieve a similar result.

[0178] In the claims, as well as in the specification above, all transitional phrases such as “comprising,” “including,” “carrying,” “having,” “containing,” “involving,” “holding,” “composed of,” and the like are to be understood to be open-ended, i.e., to mean including but not limited to. Only the transitional phrases “consisting of” and “consisting essentially of” shall be closed or semi-closed transitional phrases, respectively.

[0179] To the extent that the present disclosure has utilized the term “invention” in various titles or sections of this specification, or in the context of those sections, this term has been included as required by the formatting requirements of word document submissions (i.e., docx submissions) pursuant the guidelines/requirements of the United States Patent and Trademark Office and shall not, in any manner, be considered a disavowal of any subject matter.

[0180] In the foregoing description, certain terms have been used for brevity, clearness, and understanding. No unnecessary limitations are to be implied therefrom beyond the requirement of the prior art because such terms are used for descriptive purposes and are intended to be broadly construed.

[0181] Moreover, the description and illustration of various embodiments of the disclosure are examples and the disclosure is not limited to the exact details shown or described.

## Claims

1. A debris chute assembly comprising: a plurality of wall members selectively engageable with a scaffold; a passageway defined in each wall member of the plurality of wall members; wherein a portion of the scaffold is received within the passageway; a flange provided on at least one wall member of the plurality of wall members; a fastener provided on the at least one wall member; and wherein the flange is removably securable to the scaffold via the fastener.
2. The debris chute assembly according to claim 1, further comprising: a scaffold comprising: a plurality of standards spaced a distance apart from one another; a plurality of ledgers extending between adjacent standards of the plurality of standards; wherein a ledger of the plurality of ledgers is received within the passageway; and wherein the flange and a standard of the plurality of standards are removably securable to one another.
3. The debris chute assembly according to claim 1, wherein the at least one wall member comprises: a wall panel having a top, a bottom, and a first side and a second side extending between the top and the bottom; and wherein the flange extends outwardly from the first side.
4. The debris chute assembly according to claim 3, wherein the wall panel further comprises: an inner surface and an outer surface extending between the top and the bottom; and wherein the flange is oriented at an angle greater than 90 degrees relative to the inner surface of the wall panel.
5. The debris chute assembly according to claim 1, wherein each wall member comprises: a wall panel having a top, a bottom and a first side and a second side extending between the top and the bottom; a connector extending outwardly from an outer surface of the wall panel proximate the top;

and wherein the passageway is defined by the connector.

**6.** The debris chute assembly according to claim 5, wherein the fastener extends outwardly from an outer surface of the flange.

**7.** The debris chute assembly according to claim 6, further comprising: a tie wire operably engaged with the fastener.

**8.** The debris chute assembly according to claim 7, wherein the tie wire extends between the portion of the scaffold and the fastener.

**9.** The debris chute assembly according to claim 4, further comprising: a channel defined in the debris chute assembly, wherein the channel is bounded and defined by the inner surface of the wall panel and an inner surface of the flange of all of the plurality of wall members.

**10.** The debris chute assembly according to claim 9, wherein the plurality of wall members includes a first wall member and a second wall member; wherein an aperture is defined between an outer surface and an inner surface of the second wall member; and wherein the aperture is in fluid communication with the channel of the debris chute assembly.

**11.** The debris chute assembly according to claim 10, further comprising: a door located proximate the aperture defined in the second wall panel; wherein the door is moveable between an open position and a closed position; wherein when the door is the open position access to the channel of the debris chute assembly is enabled; and wherein when the door is in the closed position access to the channel of the debris chute assembly is restricted.

**12.** The debris chute assembly according to claim 11, further comprising: a securement mechanism which selectively engages the door to a standard of the plurality of standards.

**13.** The debris chute assembly according to claim 12, wherein the door is biased into the closed position.

**14.** The debris chute assembly according to claim 5, wherein the plurality of wall members comprises: a plurality of first wall members; a plurality of second wall members; and at least one third wall member.

**15.** The debris chute assembly according to claim 14, wherein the plurality of first wall members comprises: a first flange extending outwardly from first side of the wall panel; and a second flange extending outwardly from the second side of the wall panel.

**16.** The debris chute assembly according to claim 14, wherein the plurality of wall members comprises: a first lip extending outwardly from first side of the wall panel; and a second lip extending outwardly from the second side of the wall panel.

**17.** The debris chute assembly according to claim 14, wherein the third wall member is a hopper wall member.

**18.** A method of assembling a debris chute assembly comprising: providing a scaffold; providing a plurality of wall members; defining a passageway in each wall member of the plurality of wall members; providing an attachment mechanism proximate a top of each wall member; selectively engaging a line with the attachment mechanism of a wall member of the plurality of wall members; lowering the wall member of the plurality of wall members onto a portion of the scaffold; receiving the portion of the scaffold in the passageway of the wall member; and hanging the wall member from the portion of the scaffold.

**19.** The method according to claim 18, further comprising: disengaging the line from the attachment mechanism on the wall member; selectively engaging the line with a fastener on another wall member of the plurality of wall members; lowering the another wall member onto another portion of the scaffold via the line; receiving the another portion of the scaffold into the passageway of the another wall member; and hanging the another wall member from the another portion of the scaffold.

**20.** The method according to claim 18, wherein providing the scaffold further comprises: spacing a plurality of standards of a scaffold apart from one another; and extending a ledger of a plurality of ledgers of the scaffold between adjacent standards of the plurality of standards.

- 21.** The method according to claim 19, wherein the wall member of the plurality of wall members are lowered onto the ledger of the plurality of ledgers, the ledger is received within the passageway of the wall member, and the wall member is hung from the ledger.
- 22.** A method of assembling a debris chute assembly comprising: providing a scaffold; providing a plurality of wall members; engaging a wall member of the plurality of wall members with a portion of the scaffold; providing a flange on the wall member; providing a fastener on the flange; engaging a tie wire with the fastener; and securing the tie wire and thereby the flange and the wall member to another portion of the scaffold.
- 23.** The method according to claim 22, wherein securing the tie wire further comprises: threading the tie wire through an eye of the fastener; extending the tie wire around the another portion of the scaffold; tightening the tie wire around the another portion of the scaffold; and securing the flange and the wall member to the another portion of the scaffold.
- 24.** The method according to claim 23, wherein tightening the tie wire around the standard further comprises: engaging a portion of the flange of the wall member with a portion of an adjacent wall member of the plurality of wall members; and frictionally securing the adjacent wall member to the another portion of the scaffold.
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