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**A wall top crown console (100) securely affixed to a professional construction site (134) using one or more binders (122) is disclosed. The console (100) is a straight piece used during installation of last deck in condominiums and warehouse operations. The console (100) comprises an upper section (102), a lower section (106), and a pair of threaded plates (112). The upper section (102) has a first vertical member (116) affixed and extending perpendicularly downwards from a first horizontal member (114). The lower section (106) has a second vertical member (120) affixed and extending perpendicularly upwards from a second horizontal member (118). The upper section (102) and the pair of threaded plates (112) comprise one or more through-holes (124). The lower section (106) comprises one or more long holes/slots (126). The through-holes (124) are aligned with the long holes (126) and secured together using one or more threaded steel screws.**

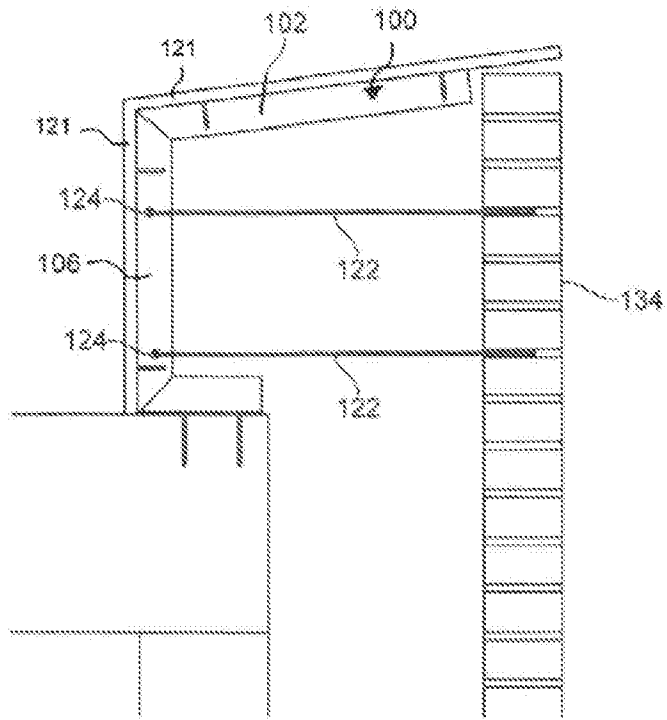


FIG. 1

## BRACKET FOR MOUNTING ON TOP OF A WALL

## TECHNICAL FIELD OF THE INVENTION

5           The invention disclosed herein generally relates to a bracket for mounting on top of a wall. More particularly, the present invention relates to a bracket configured to use while installing the last deck in areas such as condominiums and warehouses.

## BACKGROUND

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          Mounting bracket assemblies of many types are well known for securing and supporting various articles at a plurality of different heights. Conventional brackets include mounting hardware that provides support for coupling the equipment to the building having an interior and exterior surface, either directly or indirectly. Mounting  
15       brackets typically have an essentially flat plate for mounting onto an essentially vertical building site or the like by bolts, and a hinge member for fixedly or connecting to an end of an arm carrying at its opposed end, a shelf supporting various articles with suitable means for pitch and yaw adjustment, for convenience of the user.

20           Some mounting brackets and support members are unable to support heavy loads. The heavyweight supported by the shelf and the moment developed at the mounting bracket requires a strong mounting bracket for mounting by bolts on the building site and which could carry the heavyweight without deforming. Such mounting brackets are made of a solid metal plate to which a hinge member is attached by welding  
25       or by bolts.

          However, such mounting brackets are heavy, expensive, and require the additional components, which are attached by welding or bolts. Besides, some mounting brackets and support members suffer from an inability to provide adequate vertical  
30       support or horizontal support. The mounting brackets also suffer from the multiplicity of parts and an inability to achieve quick installation.

In the light of the above-mentioned problems, there is a need for a bracket configured to use while installing the last deck in areas such as condominiums and warehouses.

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#### SUMMARY OF THE INVENTION

The present invention discloses a bracket for mounting on top of a wall. More particularly, the present invention discloses a bracket configured to use while installing a last deck in areas such as condominiums and warehouses.

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According to the invention, the bracket is configured to use while installing the last deck in areas such as condominiums and warehouses. The bracket comes in one long piece. The bracket may be bent by hand in two places and one or more points or through-holes are made during assembling. In one embodiment, the bracket is mounted to a building at various locations and/or angles using one or more fasteners. In some embodiments, the bracket is made of a material that includes, but is not limited to, steel, metal alloy, aluminum alloy, carbon steel, or other suitable metal or metal alloy without departing from the scope and spirit of the exemplary embodiment of the present invention.

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In one embodiment, the bracket is a lightweight adjustable bracket that comprises an upper section, a lower section, and a pair of threaded plates. In one embodiment, the upper section has a first vertical member affixed and extending downwards from a first horizontal member to form the L-shape configuration. The upper section further comprises a first locking clip mounted between the first vertical member and the first horizontal member. In one embodiment, the lower section has a second vertical member affixed and extending perpendicularly upwards from a second horizontal member to form the L-shape configuration. The lower section further comprises one or more locking clips mounted between the second vertical member and the second horizontal member. The

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one or more locking clips include a second locking clip and a third locking clip. In one embodiment, the bracket comes in one long piece with accompanying locking clips.

In one embodiment, the upper section and the threaded plates comprise one or more through-holes. In one embodiment, the lower section comprises one or more long holes/slots. In one embodiment, the threaded plates are configured to securely connect a proximal end of the upper section to an adjacent end of the lower section using one or more fasteners to form the bracket. The through-holes of the upper section and the threaded plates are aligned with the long holes of the lower section to an appropriate position and secured using one or more fasteners. The fasteners could be, but not limited to, threaded screws, nuts, and bolts.

In one embodiment, the horizontal members and vertical members of the upper section and the lower section are made from any one of a flat steel plate or channel steel plate. In one embodiment, the lower section further comprises one or more projections or mounting tabs with mounting holes on the second vertical member, thereby mounting the bracket to the building.

In one embodiment, the bracket further comprises one or more calcium silicate construction boards. In one embodiment, the calcium silicate construction boards are installed on the vertical members of the bracket. The calcium silicate construction boards are installed as fire retardants on the vertical members. The calcium silicate construction boards are mounted with self-tapping screws, which could be sufficient to transfer all the loads to the structure. Upon mounting, the calcium silicate construction boards are exposed to wind that comes from both sides and stands unsupported while the outside of the building is erected. When the outside of the building is erected, one or more binders are inserted between the formwork brackets. In addition, insulation is provided between the outside of the building and the inner calcium silicate construction board. In one embodiment, another calcium silicate construction board having a dimension of about 15 mm is provided on the roofing fields of the bracket. The construction is then closed at the

top with the calcium silicate construction board. This calcium silicate construction board is again fastened with self-tapping screws and supported by the outside of the building.

#### BRIEF DESCRIPTION OF THE DRAWINGS

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The foregoing summary, as well as the following detailed description of the invention, is better understood when read in conjunction with the appended drawings. For illustrating the invention, exemplary constructions of the invention are shown in the drawings. However, the invention is not limited to the specific methods and structures disclosed herein. The description of a method step or a structure referenced by a numeral  
10 in a drawing is applicable to the description of that method step or structure shown by that same numeral in any subsequent drawing herein.

FIG. 1 exemplarily illustrates the mounting of a bracket to a building in one  
15 embodiment of the present invention.

FIG. 2 exemplarily illustrates a front view of a bracket in one embodiment of the present invention.

20 FIG. 3 exemplarily illustrates an exploded view of a bracket in one embodiment of the present invention.

FIG. 4 exemplarily illustrates a top view of a bracket in one embodiment of the present invention.

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FIG. 5 exemplarily illustrates a front view of a bracket in another embodiment of the present invention.

30 FIG. 6 exemplarily illustrates a perspective view of a bracket in another embodiment of the present invention.

FIG. 7 exemplarily illustrates a bottom view of a bracket in another embodiment of the present invention.

#### DETAILED DESCRIPTION OF THE INVENTION

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Referring to FIG. 1, the bracket **100** is mounted to an outside of the building **134**. The bracket **100** comes in one long piece. The bracket **100** may be bend by hand in two places and one or more points or through-holes **124** are made during assembling. In one embodiment, the bracket **100** is mounted to the building **134** at various locations and/or angles using one or more fasteners. In one embodiment, the fasteners could be, but not limited to, one or more concrete screws/anchors. In one embodiment, the brackets **100** are mounted per 800 mm. In one embodiment, the bracket **100** is made of steel. In one embodiment, the bracket **100** is fabricated from a steel sheet having a dimension of about 40x40x50x2mm. In one embodiment, the bracket **100** comprises a first section or an upper section **102** and a second section or a lower section **106**. The bracket **100** is affixed or mounted to the building **134** using one or more binders **122** via through-holes **124**. In one embodiment, the bracket **100** is used as a finish after the last deck has been laid. In one embodiment, the bracket **100** could be used instead of an element or masonry wall. In one embodiment, the binders **122** could be one or more fasteners, for example, threaded screws. In one embodiment, the bracket **100** is available in two versions/configurations, including an adjustable type and a non-adjustable type.

The bracket **100** is a more economical solution and energy-right. The bracket **100** eliminates the long term use of a crane. The bracket **100** has a possibility of much more insulation as well as significant time savings in man-hours for assembly.

Referring to FIG. 2, a front view of the bracket **100**, according to one embodiment of the present invention. In one embodiment, the bracket **100** is a height adjustable bracket. In one embodiment, the bracket **100** comprises an upper section **102** and a lower section **106**. In one embodiment, the bracket **100** comprises 4 pcs 2.5 mm steep clips such as first locking clip **104** and second locking clip **108**, and 2 pcs of 2.5 mm steel clips such

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as third locking clip **110**. In one embodiment, the first clip **104** and the second clip **108** are short locking clips, whereas the third clip **110** is a long locking clip. In one embodiment, the bracket **100** comes in one long piece with accompanying locking clips (**104**, **108**, and **110**). In one embodiment, the upper section **102** and the lower section **106** are configured in L-shape. In one embodiment, the upper section **102** and the lower section **106** are connected via a pair of threaded plates **112** (shown in FIG. 3) using one or more fasteners to form the bracket **100**. In one embodiment, the bracket **100** has a height ranges from about 500 mm to about 620 mm. In another embodiment, the bracket **100** could have a height of about 800 mm.

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Referring to FIG. 3, an exploded view of the bracket **100**, according to one embodiment of the present invention. In one embodiment, the bracket **100** is a lightweight adjustable bracket that comprises an upper section or top U-rail **102**, a lower section or bottom U-rail **106**, and a pair of threaded plates **112**. In one embodiment, the upper section **102** has a first vertical member **116** affixed and extending downwards from a first horizontal member **114** to form the L-shape configuration. The upper section **102** further comprises the first locking clip **104** mounted between the first vertical member **116** and the first horizontal member **114**. In one embodiment, the first horizontal member **114** has a length of about 460 mm. In one embodiment, the first horizontal member **114** could be larger than the first vertical member **116**. In one embodiment, the first vertical member **116** extends downwards from the first horizontal member **114** at an angle of about 96°.

In one embodiment, the lower section **106** has a second vertical member **120** affixed and extending perpendicularly upwards from a second horizontal member **118** to form the L-shape configuration. The lower section **106** further comprises one or more locking clips mounted between the second vertical member **120** and the second horizontal member **118**. The one or more locking clips include a second locking clip **108** and a third locking clip **110**. In one embodiment, the second vertical member **120** is larger than the second horizontal member **118**. In one embodiment, the second vertical member **120** extends upwards from the second horizontal member **118** at an angle of about 90°.

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In one embodiment, the upper section **102** and the threaded plates **112** comprise one or more through-holes **124**. In one embodiment, the lower section **106** comprises one or more elongated holes/slots **126**. In one embodiment, the lower section **106** includes  
5 several holes for assembling the upper section **102** and the lower section **106** using one or more fasteners. The fasteners could be, but are not limited to, four self-drilling screws. In one embodiment, the upper section **102** and the lower section **106** comprises one or more through holes for mounting the binders **122**. In one embodiment, the threaded plates **112** are configured to securely connect a proximal end of the upper section **102** to an adjacent  
10 end of the lower section **106** using one or more fasteners to form the bracket **100**. The through-holes **124** of the upper section **102** and the threaded plates **112** are aligned with the long holes **126** of the lower section **106** to an appropriate position and secured using one or more fasteners. The fasteners could be, but are not limited to, threaded screws, nuts, and bolts.

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In one embodiment, the horizontal members (**114** and **118**) and vertical members (**116** and **120**) of the upper section **102** and the lower section **106** are made from any one of a flat steel plate or channel steel plate. In one embodiment, the lower section **106** further comprises one or more projections or mounting tabs **128** with mounting holes **130**  
20 on the second vertical member **120**, thereby mounting the bracket **100** to the building **134**. In one embodiment, the locking clips (**104**, **108**, and **110**) are twisted/locked immediately before mounting. In one embodiment, the bracket **100** bolted to an inside of the building or concrete deck using one or more  $\text{\O} 32 \text{ X } 3\text{mm}$  washers/discs and one or more M8 concrete screws/anchors. When the last deck is established, the upper section  
25 **102** and the lower section **106** are connected using at least two  $\text{\O} 32 \text{ X } 3\text{mm}$  washers and at least two M8 concrete screws/anchors.

In one embodiment, the bracket **100** further comprises one or more calcium silicate construction boards **121** (shown in Fig. 1). In one embodiment, the calcium  
30 silicate construction boards **121** are mounted on the lower section **106**. In one embodiment, the calcium silicate construction boards **121** are installed on the vertical

members (**116** and **120**) of the bracket **100**. The calcium silicate construction boards **121** are installed as fire retardants on the vertical members (**116** and **120**). The calcium silicate construction boards **121** are mounted with self-tapping screws, which could be sufficient to transfer all the loads to the structure. Upon mounting, the calcium silicate construction boards **121** are exposed to wind comes from both sides and stands unsupported while the outside of the building **134** is erected. When the outside of the building **134** is erected, the binder **122** (shown in FIG. 1) is inserted between the formwork bracket. In addition, insulation is provided between the outside of the building **134** and inner calcium silicate construction board **121**. In one embodiment, another calcium silicate construction board **121** having a dimension of about 15 mm is provided on the roofing fields of the bracket **100**. Further, the construction is closed at the top with the calcium silicate construction board as a roof. This calcium silicate construction board **121** is again fastened with self-tapping screws and supported by the outside of the building **134**.

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In another embodiment, a non-adjustable bracket **100** comprises an upper section and a lower section in one piece. In one embodiment, the non-adjustable bracket **100** further comprises 4 pcs 2.5 mm steel clips such as first locking clip and second locking clip and 2pcs 2.5 mm steel clips such as third locking clip. Further, the non-adjustable bracket **100** has one or more through-holes for mounting binders **122**.

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Referring to FIG. 6, a top view of the bracket **100**, according to one embodiment of the present invention. The bracket **100** comprises the upper section **102** having the first horizontal member **114** and the first vertical member **116**. In one embodiment, the first horizontal member **114** and the first vertical member **116** are adjustably connected using a hinge connector **132**. The bracket **100** further comprises the lower section **106** having the second horizontal member **118** and the second vertical member **120**. In one embodiment, the second horizontal member **118** and the second vertical member **120** are adjustably connected using the hinge connector **132**.

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Referring to FIGs. 5-7, various views of a wall top crown bracket **200**, according to different embodiments of the present invention. In one embodiment, the bracket **200** could be delivered in one long piece with one or more accompanying clips. FIG. 5 exemplarily illustrates a front view of the bracket **200**, according to another embodiment of the present invention. FIG. 6 exemplarily illustrates a perspective view of the bracket **200**, according to another embodiment of the present invention. FIG. 7 exemplarily illustrates a bottom view of the bracket **200**, according to another embodiment of the present invention.

The bracket **200** is bend by hand in two places at the recesses. In one embodiment, the bracket **200** has a vertical section **206** and a horizontal section including an upper section **202** and a lower section **207**. In one embodiment, the bracket **200** has one or more mounting hole or through-holes **212** at the upper section **202** and the lower section **207**. In one embodiment, the accompanying clips include, but are not limited to, a first locking clip **204**, a second locking clip **208**, and a third locking clip **210**. In one embodiment, the first locking clip **204** is mounted at a bend **214** between the upper section **202** and the vertical section **206**. In one embodiment, the second locking clip **204** and third locking clip **210** are mounted at the bend **214** between the vertical section **206** and the lower section **207**.

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In one embodiment, the upper section **202** has a length of about 370 mm. In one embodiment, the vertical section **206** has a length of about 480 mm. In one embodiment, the lower section **207** has a length of about 150 mm. In one embodiment, an angle of the bend **214** between the upper section **202** and the vertical section **206** could be about 97°. In one embodiment, the bracket **200** further comprises one or more mounting holes or through-holes **212** at each section (**202**, **206**, and **207**) configured to mount to the building using fasteners. In one embodiment, the length between the through-holes **212** could be about 267 mm.

In one embodiment, the bracket **200** is bolted to the concrete deck using 2 pcs. of Ø 32 X 3mm washers and 2 pcs. of M8 concrete screws / anchors. In addition, 15 mm

calcium silicate construction boards are mounted on the vertical part **206** and on the horizontal part (**202** and **207**) of the brackets **200**. In one embodiment, the calcium silicate construction boards are mounted with self-tapping screws, for example, 4.2 x 25mm drill screws. In one embodiment, when the outside of the building **134** is erected, binders are inserted in the through-holes **212** in the bracket **200** and then insulation is inserted between outside of the building and inner calcium silicate construction board.

According to one embodiment of the present invention, the bracket (**100** or **200**) is mounted to the building **134** in a typical use case. The bracket **100** is securely mounted to the building, for example, warehouse, using self-tapping screws. In one embodiment, a plurality of brackets **100** could be mounted on the last deck. During assembly, two holes are drilled for concrete screws for attaching the bracket **100** to the building **134**. The brackets **100** are set up in relation to any arrow height on deck. Further, the calcium silicate construction boards **121** are mounted on the bracket **100** horizontally and vertically. In one embodiment, the brackets **100** are loaded with the dead weight of the calcium silicate construction board, wind load and snow load or dead weight and snow load alone for different load combinations.

The advantages of the present invention include, but not limited to, the bracket **100** could be mounted at various locations and/or angles on the building **134** while installing the last deck of multi-storey buildings such as condominiums and warehouses. The bracket **100** is made with a simple design, yet efficient, and meets all the requirements such as snow/wind loads. Also, the bracket **100** could be adjusted to various heights based on the requirement. Further, the bracket **100** is made with a simple design yet effective, reliable, and most convenient to use in warehouse operations.

## PATENTKRAV

1. Beslag (100), omfattende:

en øvre sektion (102) med en første låseklemme (104);

5 en nedre sektion (106) med en eller flere låseklemmer, og

et par gevindplader (112), kendetegnet ved at:

gevindpladerne (112) er konfigureret til at kunne forbinde en proksimal ende af den øvre sektion (102) med en tilstødende ende af den nedre sektion (106) ved hjælp af et eller flere fastgørelsesmidler til dannelse af beslaget (100),

10 den øvre sektion (102) har en første vertikal del (116) fastgjort og strækkende sig nedad fra en første horisontal del (114) i en vinkel på større end 90 grader,

den nedre sektion (106) har en anden vertikal del (120) fastgjort og strækkende sig vinkelret opad fra en anden horisontal del (118), og

15 beslaget (100) er konfigureret til montering flere forskellige steder og/eller vinkler på en bygning som en afslutning efter installation af et sidste dæk i bygningen.

2. Beslaget (100) ifølge krav 1, hvor den ene eller de flere låseklemmer i den nedre sektion (106) er en anden låseklemme (108) og en tredje låseklemme (110).

3. Beslaget (100) ifølge krav 1, hvor den øvre sektion (102) og den nedre sektion (106) er konfigureret i en L-form.

20 4. Beslaget (100) ifølge krav 1, hvor den øvre sektion (102) og den nedre sektion (106) er fremstillet af et U-jern.

5. Beslaget (100) ifølge krav 1, hvor den øvre sektion (102) og den nedre sektion (106) er monteret til en bygning ved hjælp af et eller flere fastgørelsesmidler.

6. Beslaget (**100**) ifølge krav 1, hvor beslaget er fremstillet af en metallegering, såsom en aluminiumslegering.

7. Beslaget (**100**) ifølge krav 1, hvor beslaget er fremstillet af stål, såsom kulstofstål.

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8. Anvendelse af et beslag ifølge et hvilket som helst af kravene 1-7 til fastgørelse af en eller flere kalciumsilikat byggeplader (**121**).

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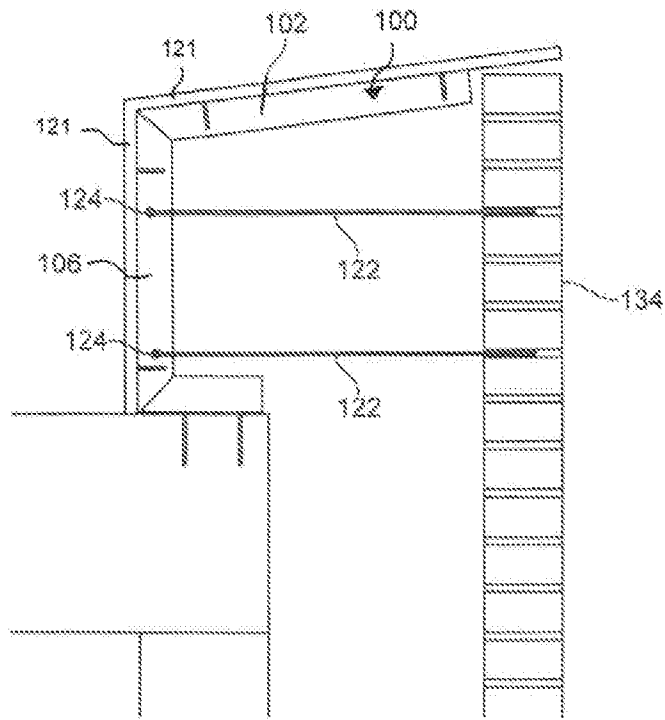


FIG. 1

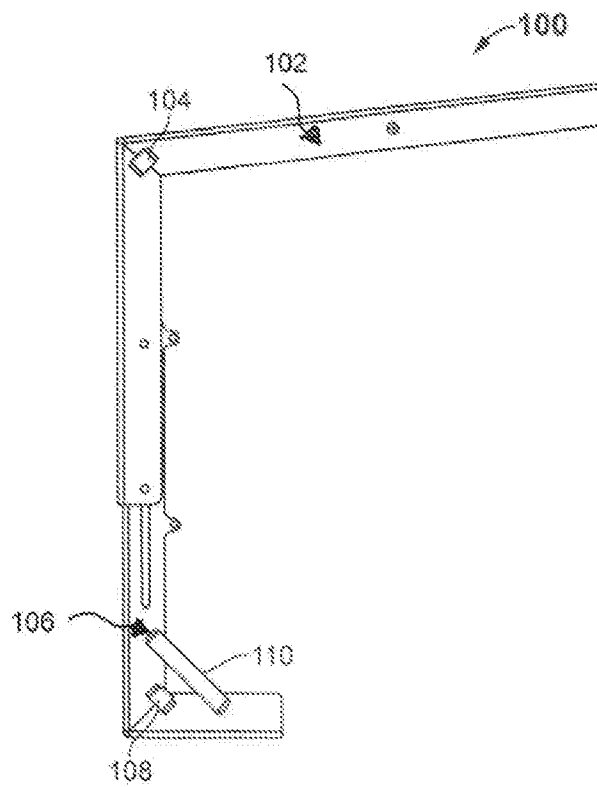
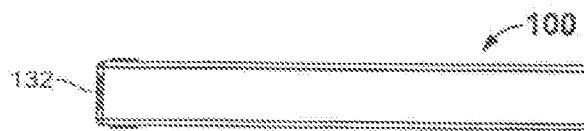
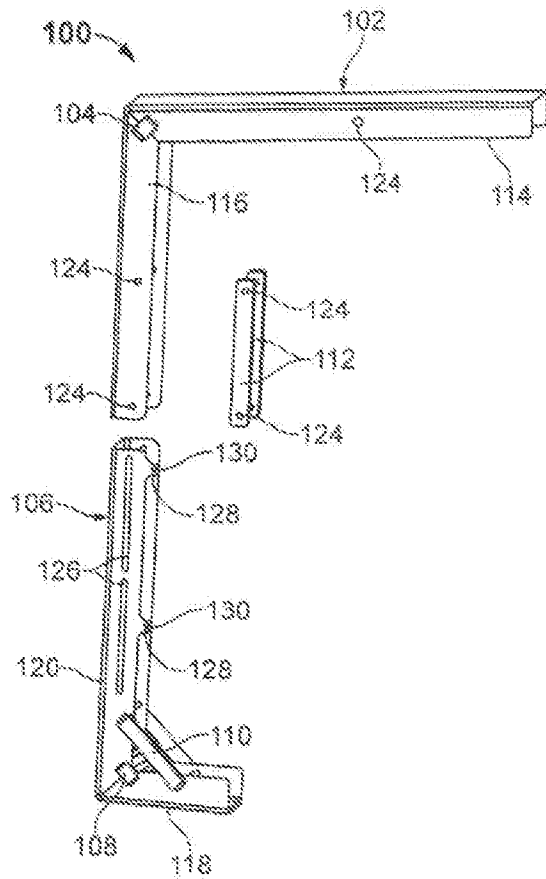


FIG. 2





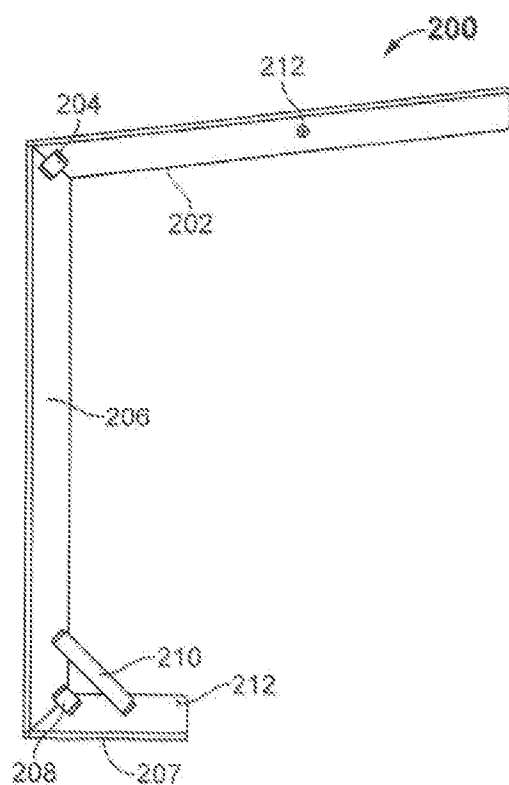


FIG. 5

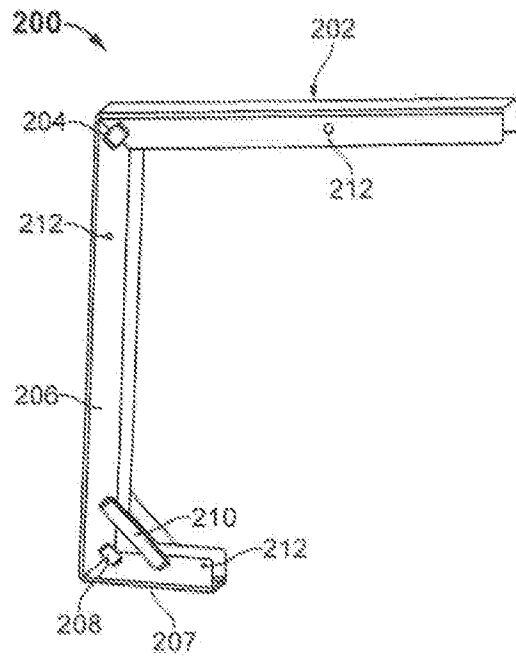


FIG. 6

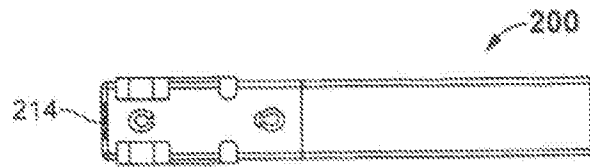


FIG. 7



## Yderligere nyhedsundersøgelsesrapport - patent

Ansøgningsnummer

PA 2020 01189

<b>A. Klassifikation</b>		
E04D 3/40 (2006.01) Ifølge International Patent Classification (IPC)		
<b>B. Undersøgelsesområde</b>		
PCT-minimumsdokumentation undersøgt (klassifikationssystem efterfulgt af klassifikationssymboler) IPC og CPC: E04B, E04D		
Undersøgt dokumentation ud over PCT-minimum DK, NO, SE, FI: IPC-klasser som anført i Boks A ovenfor		
Anvendte elektroniske databaser (navnet på database og evt. søgetermer) EPODOC, WPI, FULDTEKST: ENGELSK		
<b>C. Relevante dokumenter</b>		
Kategori*	Citerede dokumenter evt. med angivelse af relevante afsnit	Relevant for krav nr.
A	<a href="#">JP S6094518 U</a> (UKENDT) 1985.06.27. Se figur 3, samt krav 1.	1-7
A	<a href="#">FR 2951476 A1</a> (DANI ALU) 2011.04.22. Se det engelske sammendrag og figurerne.	1-7
A	<a href="#">JP 2006063763 A</a> (TRY ENGINEERING CO LTD) 2006.03.09. Se det engelske sammendrag og figurerne.	1-7
A	<a href="#">JP H0485440 A</a> (GANTAN BEAUTY KOGYO KK) 1992.03.18. Se det engelske sammendrag og figurerne.	1-7
<input type="checkbox"/> Yderligere dokumenter er listet i fortsættelse af Boks C		
* Kategori af citerede dokumenter:		
"A" Dokument, der repræsenterer den kendte teknik (teknikkens stade) uden at foregribe nyhed eller væsentlig adskillelse.	"P" Dokument, der er publiceret i perioden mellem prioritets- og indleveringsdatoen.	
"D" Dokument citeret i ansøgningen.	"T" Dokument, som ikke er i konflikt med ansøgningen, men som er citeret for at forstå det grundlæggende princip eller teorien bag opfindelsen.	
"E" Dokument, der har indleverings- eller prioritetsdato, der ligger før indleveringsdatoen for den behandlede ansøgning, men som er offentliggjort senere end indleveringsdatoen.	"X" Særlig relevant dokument; opfindelsen har ikke nyhed eller adskiller sig ikke væsentligt fra kendt teknik, når dokumentet vurderes alene.	
"L" Dokument, som giver tvivl om et prioritetskrav eller som citeres for at fastlægge offentliggørelsesdatoen for et andet dokument eller af andre årsager (som specificeret).	"Y" Særlig relevant dokument; opfindelsen adskiller sig ikke væsentligt fra kendt teknik, når dokumentet kombineres med ét eller flere dokumenter af samme art, og kombinationen af disse er nærliggende for fagmanden.	
"O" Dokument, der omhandler ikke-skriftlig offentliggørelse, fx foredrag, udstillinger eller film.	"&" Dokument i samme patentfamilie.	
<b>Patent- og Varemærkestyrelsen</b> Helgeshøj Allé 81 DK-2630 Taastrup Danmark Tlf.: +45 43 50 80 00	Dato for færdiggørelsen af nyhedsundersøgelsen	16/08/2023
	Nyhedsundersøgelsen er udført af	Mehrak Maleki Tlf.: +45 43 50 80 43



## Yderligere nyhedsundersøgelsesrapport - patent

Ansøgningsnummer  
PA 2020 01189

C. Relevante dokumenter (fortsættelse)		
Kategori*	Citerede dokumenter evt. med angivelse af relevante afsnit	Relevant for krav nr.