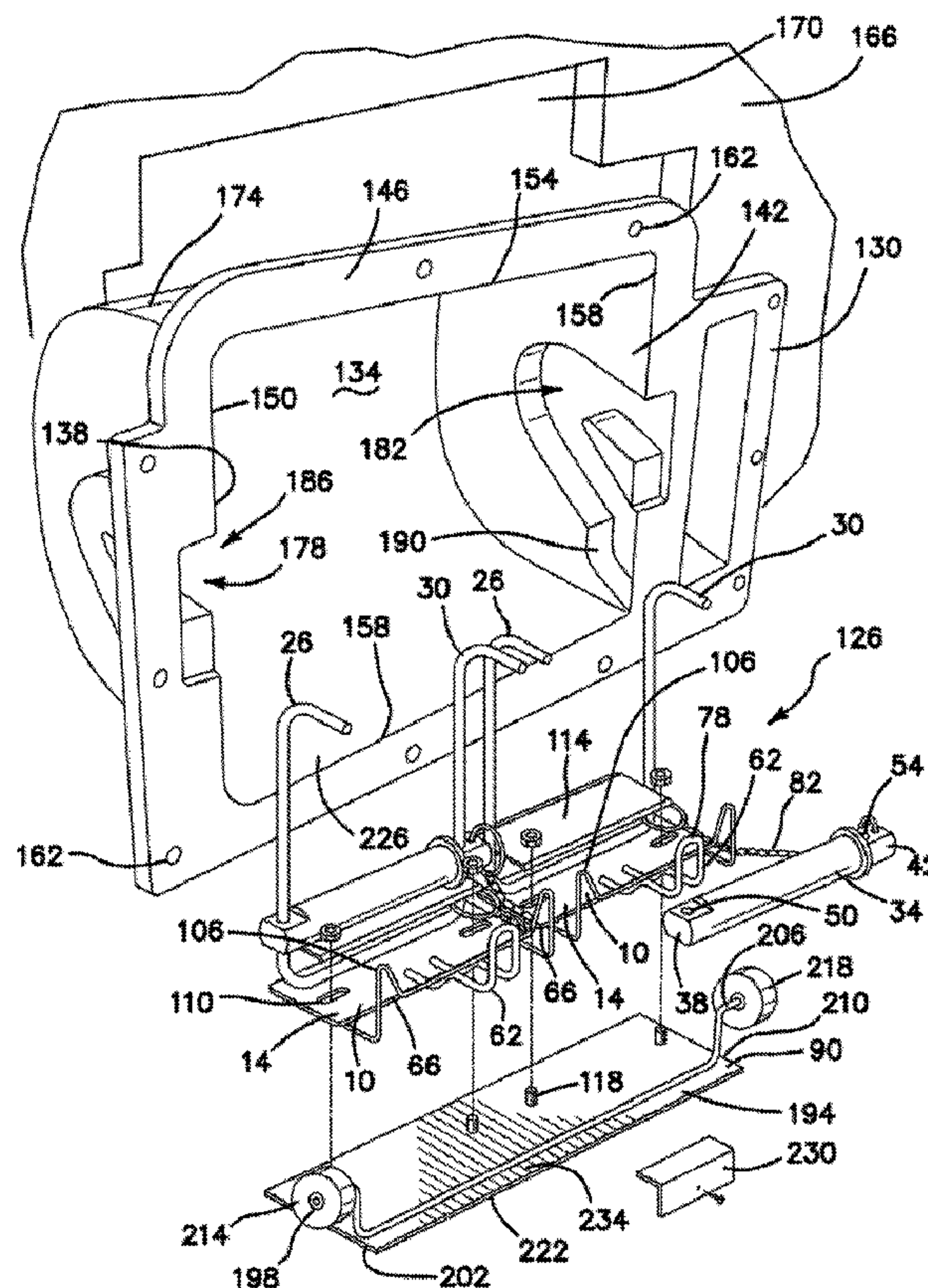




(86) Date de dépôt PCT/PCT Filing Date: 2011/06/29
(87) Date publication PCT/PCT Publication Date: 2012/12/06
(45) Date de délivrance/Issue Date: 2017/08/01
(85) Entrée phase nationale/National Entry: 2013/11/28
(86) N° demande PCT/PCT Application No.: US 2011/042429
(87) N° publication PCT/PCT Publication No.: 2012/166157
(30) Priorité/Priority: 2011/06/01 (US13/151,228)

(51) Cl.Int./Int.Cl. *B26F 3/02* (2006.01),
B65H 35/04 (2006.01), *B65H 35/10* (2006.01)
(72) Inventeur/Inventor:
TAN, DANIEL BRIAN, US
(73) Propriétaire/Owner:
TAN, DANIEL BRIAN, US
(74) Agent: METHOD LAW PROFESSIONAL
CORPORATION

(54) Titre : DISTRIBUTEUR DE SACHETS A PIVOTS DE NOYAU
(54) Title: CORE PIN BAG DISPENSER



(57) Abrégé/Abstract:

A core pin bag dispenser includes a planar base sized and shaped to fit beneath a roll of film bags. First and second upwardly extending rods are mounted to the base. A retaining pin is sized and shaped to fit slidably within a hollow core of the bag roll. The

(57) **Abrégé(suite)/Abstract(continued):**

pin has first and second orthogonal apertures located adjacent the first and second ends that are spaced apart by at least a width of the roll of film bags and are sized and shaped to fit slidably over the first and second upwardly extending rods. An upward pointing snagging hook is mounted adjacent a front edge of the base and is sized and shaped to engage either a chisel cut or a perforation in the bags. Two of the dispensers are mounted to an adapter designed to fit into the side channels of a bin mounted to a vertical surface.

(10) International Publication Number
WO 2012/166157 A1

- *with international search report (Art. 21(3))*

(57) Abstract: A core pin bag dispenser includes a planar base sized and shaped to fit beneath a roll of film bags. First and second upwardly extending rods are mounted to the base. A retaining pin is sized and shaped to fit slidably within a hollow core of the bag roll. The pin has first and second orthogonal apertures located adjacent the first and second ends that are spaced apart by at least a width of the roll of film bags and are sized and shaped to fit slidably over the first and second upwardly extending rods. An upward pointing snagging hook is mounted adjacent a front edge of the base and is sized and shaped to engage either a chisel cut or a perforation in the bags. Two of the dispensers are mounted to an adapter designed to fit into the side channels of a bin mounted to a vertical surface.

CORE PIN BAG DISPENSERField of Invention

This invention relates to the field of plastic and other film bag storage and dispensing and more specifically to bag dispensers adapted to attach to a horizontal surface
5 or a vertical surface using an existing wall mounted bin.

Background of the Invention

In supermarkets and grocery stores space for the mounting of bag dispensers is usually at a premium. It is desirable to use as much of the space available as possible for
10 the display of produce or the handling of other groceries. However, certain facilities must be provided to the store's customers and checkout personnel for efficient produce sales and merchandise handling. One such facility is the provision of produce bags that may be conveniently used by the customers to collect the produce that they wish to purchase. Another facility is a checkout counter that has a bag dispensing rack mounted into a
15 vertical counter surface, thereby providing unencumbered horizontal counter space for the handling of the customer's merchandise. Ideally, the store would like to provide simple to use produce and merchandise bag dispensers that are easy to maintain, hold a large quantity of bags of a sufficient size and which do not require frequent servicing.

In addition, grocery stores would like to use space for the bag dispensers not
20 readily usable for the display of produce or other merchandise. It is most convenient to display produce and other items on angled or substantially horizontal shelves. Vertical surfaces, such as the walls of display stands and shelves are good locations to position bag dispensers as such surfaces are not readily usable for other displays. Toward this end, some supermarket chains have developed standardized plastic bins that are installed into

vertical and some horizontal surfaces. These bins are designed to accommodate a horizontal rod on which a large roll of produce bags is rotatably suspended. The present invention makes use of these standardized bins to make available larger stores of produce or merchandise bags to the shopping customer and checkout personnel.

5 A number of dispensing devices and produce bags have been designed to efficiently provide produce bags and merchandise bags to shopping customers.

Patent Application No. 2002/0185513, published for *Morris* is directed to a bag separator and dispenser with a support frame that holds a shaft on which is positioned a roll of bags. The frame holds the shaft above a tapered shelf having a bag stop so that as
10 bags are removed from roll onto the shelf the handles straddle bag stop and the hole between them. Frame has a first arm and an opposing second arm that holds shaft in place to prevent shaft from rotating to holes are formed in shaft that receive first and second arms and. The end of first arm is curved so that when inside of shaft it is coaxial with shaft while the end of second arm is not curved and when inside of shaft it remains
15 perpendicular to the axis of shaft. The roller bag comprises a plurality of bags wound onto a core with an interior diameter that is slightly larger than the exterior diameter of shaft so that as roll rotates freely on core.

U.S. Patent Application No. 2003/0098326, published for *Wile* illustrates a bag dispensing rack which includes a rod which serves as the axle which fits into a tube of the
20 bag roll. By means of the swinging arm, the rack keeps the roll of bags touching a fixed surface of the rack which provides a friction surface and causes resistance to unrolling as individual bags are removed.

U.S. Patent Application No. 2011/0073629, published for *Tseng* discloses a plastic grocery bag dispenser with side panels and a guide bar. A swing arm serves as an axle

around which a plastic bag roll rotates. A plastic roll stop is located at the free end of the swing arm and adapted to keep the plastic bag roll in place during use. In operation, the plastic bag is pulled down over the rip tongue which causes the plastic bag roll to rotate until perforations in plastic bag pass over the rip tongue allowing bag to separate from the
5 nested plastic bag roll.

U.S. Patent No. 6,379,292, issued to *Simhaee* is directed to a continuous roll of plastic bags with separation lines for use in a dispenser mechanism (prior art Patent 5,558,262). The plastic bags are provided in a roll of which includes a central axle. The axle rides in a pair of tracks and the film is pulled past a finger in a separating tongue
10 which engages a slot in the center of the perforation line to separate the individual bags from the roll. The axle extends beyond the limits of the plastic bag roll core.

U.S. Patent Application No. 2005/0098600, published for *Yeh et al.* discloses to a streamline folded T-shirt style produce bag for roll mounting. The folded bags are wound onto a cylindrical core that stands beyond the outside edges of the plastic bags.

15 It is an objective of the present invention to provide a compact system for dispensing plastic produce bags or merchandise bags that can be removably installed in standardized plastic bins provided by grocery store owners. It is a further objective to provide such a system that can store an increased number of relatively large produce or merchandise bags in the standardized bin. It is a still further objective of the invention to
20 provide a dispenser system that provides a visual indication when the bag roll needs to be replaced. It is yet a further objective to provide such a system that can be easily fabricated from existing dispenser and other mechanical components. Finally, it is an objective of the present invention to provide such a system that is durable, inexpensive and simple to service.

While some of the objectives of the present invention are disclosed in the prior art, none of the inventions found include all of the requirements identified.

Summary of the Invention

5 The present invention addresses all of the deficiencies of prior art bag dispenser inventions and satisfies all of the objectives described above.

(1) A core pin bag dispenser providing the desired features may be constructed from the following components. A planar base is provided. The base is sized and shaped to fit beneath a roll of film bags. First and second upwardly parallel, extending rods are
10 provided. The rods are mounted to the planar base. A retaining pin is provided. The pin has a first end, a second end, is sized and shaped to fit slidably within a hollow core of the roll of film bags. The pin has first and second orthogonal apertures located adjacent the first and second ends. The first and second orthogonal apertures are spaced apart by at least a width of the roll of film bags and are sized and shaped to fit slidably over the first
15 and second upwardly extending rods, respectively.

An upward pointing snagging hook is provided. The hook is mounted adjacent a front edge of the base and is sized and shaped to engage either a chisel cut or a perforation in the bags. The retaining pin is introduced into the hollow core of the roll of film bags and located upon the first and second upwardly extending rods with a first bag from the
20 roll extending outwardly beneath the roll and over the snagging hook, thereby providing a dispensing mechanism for the bags.

(2) In a variant of the invention, a security link is provided. The link flexibly attaches the retaining pin to the dispenser so as to prevent loss of the pin.

(3) In another variant, the security link is selected from the group that includes chain, wire, string, cord or flexible plastic rod.

(4) In still another variant, the pin further includes a collar. The collar is located adjacent the second end and is sized and shaped to prevent the pin from sliding completely
5 into the core.

(5) In yet another variant, the planar base is attached to a fixture for mounting to a horizontal surface.

(6) In a further variant, the planar base is attached to a fixture for mounting to either a vertical or angled surface.

10 (7) In still a further variant, a bag stream guide is provided. The bag stream guide is attached adjacent the front edge of the planar base and spaced inwardly from the snagging hook.

(8) In yet a further variant, the planar base further includes at least one aperture for mounting the base to a fixture.

15 (9) In another variant of the invention, a raised platform is provided. The platform is spaced upwardly from the base and provides clearance for securing at least one fastener through the aperture.

(10) In still another variant, the first and second upwardly extending rods are curved to reduce a height of the dispenser.

20 (11) An adapter for a bin includes a support enclosure bin for a roll of film bags. The bin has a half round cylindrical wall, first and second vertical side walls. A supporting rim is provided. The rim is located orthogonally to front edges of the side walls and upper and lower edges of the cylindrical wall and has spaced apertures for mounting the bin to a surface. The surface has an opening sized and shaped to permit passage of

outer surfaces of the walls but not the supporting rim. The vertical side walls have first and second integral channels. The channels provide an entry point and support for a rod. The rod is sized and shaped to support the roll of bags in the channels.

The adapter includes first and second bag dispensers for vertically folded roll mounted film bags. Each of the dispensers has a planar base. The base is sized and shaped to fit beneath a roll of the film bags and is mounted to a fixture. The fixture includes a planar surface. The surface is sized and shaped to fit at least partially within the bin. A first axle is provided. The first axle is mounted orthogonally adjacent a first side edge of the fixture. A second axle is provided. The second axle is mounted orthogonally adjacent a second side edge of the fixture. The first axle is mounted coaxially with the second axle. First and second positioning wheels are provided. The positioning wheels are mounted to the first and second axles and located to slidably engage the first and second integral channels with a bottom surface of the fixture located adjacent a lower portion of the cylindrical wall of the bin.

(12) In a variant of the invention, the dispensers further include at least one aperture penetrating the planar base for mounting the base to the fixture and a raised platform. The platform is spaced upwardly from the base and provides clearance for securing at least one fastener through the aperture.

(13) In another variant, the dispensers further include first and second parallel, upwardly extending rods. The rods are mounted to the planar base. A retaining pin is provided. The pin has a first end, a second end, is sized and shaped to fit slidably within a hollow core of the roll of film bags. The pin has first and second orthogonal apertures located adjacent the first and second ends. The first and second orthogonal apertures are spaced apart by at least a width of the roll of film bags and are sized and shaped to fit

slidably over the first and second upwardly extending rods, respectively. An upward pointing snagging hook is provided. The hook is mounted adjacent a front edge of the base and is sized and shaped to engage either a chisel cut or a perforation in the bags. The retaining pin is introduced into the hollow core of the roll of film bags and located upon
5 the first and second upwardly extending rods with a first bag from the roll extending outwardly beneath the roll and over the snagging hook, thereby providing a dispensing mechanism for the bags.

(14) In still another variant, the dispensers further include a security link. The link flexibly attaches the retaining pin to the dispenser so as to prevent loss of the pin.

10 (15) In yet another variant, the security link is selected from the group that includes chain, wire, string, cord or flexible plastic rod.

(16) In a further variant, the pin further includes a collar. The collar is located adjacent the second end and is sized and shaped to prevent the pin from sliding completely into the core.

15 (17) In still a further variant, the dispensers further include a bag stream guide. The bag stream guide is attached adjacent the front edge of the planar base and spaced inwardly from the snagging hook.

(18) In yet a further variant, the first and second upwardly extending rods are curved to reduce a height of the dispenser.

20 (19) In another variant of the invention, a bracket is provided. The bracket is sized and shaped to secure the adapter to the bin.

(20) In a final variant, the bracket is an angled, rigid member sized and shaped to bear upon an upper surface of the fixture.

An appreciation of the other aims and objectives of the present invention and an understanding of it may be achieved by referring to the accompanying drawings and the detailed description of a preferred embodiment.

5 Description of the Drawings

Figure 1 is a perspective view of the preferred embodiment of the dispenser of the invention;

Figure 2 is a perspective view of the **Figure 1** embodiment with a bag roll installed;

10 **Figure 3** is a perspective view of two of the dispensers of the **Figure 1** embodiment attached to an adapter and installed in a bin;

Figure 4 is a perspective view of an exploded view of the **Figure 4** embodiment with the addition of bag stream guides;

15 **Figures 5A-5D** are side elevational views of the process of installing the adapter with attached dispensers into a bin;

Figure 6 is a perspective view of an alternative embodiment of the dispenser mounted to a fixture attached to a horizontal surface;

Figure 7 is a plan view of roll mounted bags having a chisel cut;

Figure 8 is a plan view of roll mounted bags having a perforation joining the bags;

20 **Figure 9A** is a perspective view of an alternative embodiment of the dispenser mounted to a fixture attached to a vertical surface; and

Figure 9B is a perspective view of an alternative embodiment of the dispenser mounted to a fixture attached to an angled surface.

Detailed Description of the Preferred Embodiment

(1) **Figures 1-9** illustrate a core pin bag dispenser **10** providing the desired features that may be constructed from the following components. As illustrated in **Figures 1, 2, 6, 9** and **10**, planar base **14** is provided. The base **14** is sized and shaped to fit beneath a roll **18** of film bags **22**. First **26** and second **30** upwardly extending rods are provided. The rods **26, 30** are mounted to the planar base **14**. A retaining pin **34** is provided. The pin **34** has a first end **38**, a second end **42**, is sized and shaped to fit slidably within a hollow core **46** of the roll **18** of film bags **22**. The pin **34** has first **50** and second **54** orthogonal apertures located adjacent the first **38** and second **42** ends. The first **50** and second **54** orthogonal apertures are spaced apart by at least a width **58** of the roll **18** of film bags **22** and are sized and shaped to fit slidably over the first **26** and second **30** upwardly extending rods, respectively.

An upward pointing snagging hook **62** is provided. The hook **62** is mounted adjacent a front edge **66** of the base **14** and is sized and shaped to engage either a chisel cut **70** or a perforation **74** in the bags **22**, as illustrated in **Figures 7** and **8**. As illustrated in **Figures 1, 2, 6, 9** and **10**, the retaining pin **34** is introduced into the hollow core **46** of the roll **18** of film bags **22** and located upon the first **26** and second **30** upwardly extending rods with a first bag **22** from the roll **18** extending outwardly beneath the roll **18** and over the snagging hook **62**, thereby providing a dispensing mechanism **10** for the bags **22**.

(2) In a variant of the invention, a security link **78** is provided. The link **78** flexibly attaches the retaining pin **34** to the dispenser **10** so as to prevent loss of the pin **34**.

(3) In another variant, the security link **78** is selected from the group that includes chain **82**, wire (not shown), string (not shown), cord (not shown) or flexible plastic rod (not shown).

(4) In still another variant, the pin **34** further includes a collar **86**. The collar **86** is
5 located adjacent the second end **42** and is sized and shaped to prevent the pin **34** from sliding completely into the core **46**.

(5) In yet another variant, as illustrated in **Figure 6**, the planar base **14** is attached to a fixture **92** for mounting to a horizontal surface **94**.

(6) In a further variant, as illustrated in **Figures 9A** and **9B**, the planar base **14** is
10 attached to a fixture **92** for mounting to either a vertical **98** or angled surface **102**.

(7) In still a further variant, a bag stream guide **106** is provided. The bag stream guide **106** is attached adjacent the front edge **66** of the planar base **14** and spaced inwardly from the snagging hook **62**.

(8) In yet a further variant, the planar base **14** further includes at least one aperture
15 **110** for mounting the base **14** to a fixture **92**.

(9) In another variant of the invention, as illustrated in **Figures 1-4**, a raised platform **114** is provided. The platform **114** is spaced upwardly from the base **14** and provides clearance for securing at least one fastener **118** through the aperture **110**.

(10) In still another variant, the first **26** and second **30** upwardly extending rods are
20 curved to reduce a height **122** of the dispenser **10**.

(11) As illustrated in **Figures 3-5**, an adapter for a bin **126** includes a support enclosure bin **130** for a roll **18** of film bags **22**. The bin **130** has a half round cylindrical wall **134**, first **138** and second **142** vertical side walls. A supporting rim **146** is provided. The rim **146** is located orthogonally to front edges **150** of the side walls **138**, **142** and

upper **154** and lower **158** edges of the cylindrical wall **134** and has spaced apertures **162** for mounting the bin **130** to a surface **166**. The surface **166** has an opening **170** sized and shaped to permit passage of outer surfaces **174** of the walls **138, 142, 134** but not the supporting rim **146**. The vertical side walls **138, 142** have first **178** and second **182**
5 integral channels. The channels **178, 182** provide an entry point **186** and support **190** for a rod (not shown). The rod is sized and shaped to support the roll **18** of bags **22** in the channels **178, 182**.

The adapter includes first **10** and second **10** bag dispensers for vertically folded roll mounted film bags **22**. Each of the dispensers **10** has a planar base **14**. The base **14** is
10 sized and shaped to fit beneath a roll **18** of the film bags **22** and is mounted to a fixture **90**. The fixture **90** includes a planar surface **194**. The surface **194** is sized and shaped to fit at least partially within the bin **130**. A first axle **198** is provided. The first axle **198** is mounted orthogonally adjacent a first side edge **202** of the fixture **90**. A second axle **206** is provided. The second axle **206** is mounted orthogonally adjacent a second side edge
15 **210** of the fixture **90**. The first axle **198** is mounted coaxially with the second axle **206**. First **214** and second **218** positioning wheels are provided. The positioning wheels **214, 218** are mounted to the first **198** and second **206** axles and located to slidably engage the first **178** and second **182** integral channels with a bottom surface **222** of the fixture **90** located adjacent a lower portion **226** of the cylindrical wall **134** of the bin **130**.

20 (12) In a variant of the invention, the dispensers **10** further include at least one aperture **110** penetrating the planar base **14** for mounting the base **14** to the fixture **90** and a raised platform **114**. The platform **114** is spaced upwardly from the base **14** and provides clearance for securing at least one fastener **118** through the aperture **110**.

(13) In another variant, the dispensers further include First **26** and second **30** upwardly extending rods are provided. The rods **26, 30** are mounted to the planar base **14**. A retaining pin **34** is provided. The pin **34** has a first end **38**, a second end **42**, is sized and shaped to fit slidably within a hollow core **46** of the roll **18** of film bags **22**. The pin **34**
5 has first **50** and second **54** orthogonal apertures located adjacent the first **38** and second **42** ends. The first **50** and second **54** orthogonal apertures are spaced apart by at least a width **58** of the roll **18** of film bags **22** and are sized and shaped to fit slidably over the first **26** and second **30** upwardly extending rods, respectively.

An upward pointing snagging hook **62** is provided. The hook **62** is mounted
10 adjacent a front edge **66** of the base **14** and is sized and shaped to engage either a chisel cut **70** or a perforation **74** in the bags **22**, as illustrated in **Figures 7 and 8**. As illustrated in **Figures 3 and 4**, the retaining pin **34** is introduced into the hollow core **46** of the roll **18** of film bags **22** and located upon the first **26** and second **30** upwardly extending rods with a first bag **22** from the roll **18** extending outwardly beneath the roll **18** and over the snagging
15 hook **62**, thereby providing a dispensing mechanism **10** for the bags **22**

(14) In still another variant, the dispensers further include a security link **78**. The link **78** flexibly attaches the retaining pin **34** to the dispenser **10** so as to prevent loss of the pin **34**.

(15) In yet another variant, the security link **78** is selected from the group that
20 includes chain **82**, wire (not shown), string (not shown), cord (not shown) or flexible plastic rod (not shown).

(16) In a further variant, the pin **34** further includes a collar **86**. The collar **86** is located adjacent the second end **42** and is sized and shaped to prevent the pin **34** from sliding completely into the core **46**.

(17) In still a further variant, the dispensers further include a bag stream guide **106**. The bag stream guide **106** is attached adjacent the front edge **66** of the planar base **14** and spaced inwardly from the snagging hook **62**.

(18) In yet a further variant, the first **26** and second **30** upwardly extending rods are
5 curved to reduce a height **122** of the dispenser **10**.

(19) In another variant of the invention, a bracket **230** is provided. The bracket **230** is sized and shaped to secure the adapter **126** to the bin **130**.

(20) In a final variant, the bracket **230** is an angled, rigid member sized and shaped to bear upon an upper surface **234** of the fixture **90**.

10 The core pin bag dispenser **10** and adapter for a bin **126** have been described with reference to particular embodiments. Other modifications and enhancements can be made without departing from the spirit and scope of the claims that follow.

REPLACEMENT SHEET

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CLAIMS

1. An adapter for a bin, said bin comprising:

a support enclosure bin for a roll of film bags, said bin having a half
round cylindrical wall, first and second vertical side walls;
a supporting rim, said rim disposed orthogonally to front edges of said
side walls and upper and lower edges of said cylindrical wall and
having spaced apertures for mounting said bin to a surface;
said surface having an opening sized and shaped to permit passage of
outer surfaces of said walls but not said supporting rim;
said vertical side walls having first and second integral channels, said
channels providing an entry point and support for a rod, said rod
being sized and shaped to support said roll of bags in said
channels;

said adapter comprising:

a fixture, said fixture comprising a planar surface, said surface
being sized and shaped to fit at least partially within said
bin;
at least one angled core slot bag dispenser for folded roll mounted
film bags, said dispenser comprising:
a planar base, said base being sized and shaped to
fit beneath a roll of said film bags and being
mounted to said fixture;

REPLACEMENT SHEET

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first and second parallel, upwardly extending rods,
said rods being mounted to said planar base;

a retaining pin, said pin having a first end, a second
end, being sized and shaped to fit slidably
within a hollow core of said roll of film bags
and having first and second orthogonal
apertures disposed adjacent said first and
second ends;

said first and second orthogonal apertures being
spaced apart by at least a width of said roll
of film bags and being sized and shaped to
fit slidably over said first and second
upwardly extending rods, respectively;

an upward pointing snagging hook, said hook being
mounted adjacent a front edge of said base
and being sized and shaped to engage either
of a chisel cut and a perforation in said bags;
and

said retaining pin being introduced into said hollow
core of said roll of film bags and disposed
upon said first and second upwardly
extending rods with a first bag from said roll

REPLACEMENT SHEET

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extending outwardly beneath said roll and
over said snagging hook, thereby providing
a dispensing mechanism for said bags;
a first axle, said first axle being mounted orthogonally adjacent a
first side edge of said fixture;
a second axle, said second axle being mounted orthogonally
adjacent a second side edge of said fixture;
said first axle being mounted coaxially with said second axle;
first and second positioning wheels, said positioning wheels being
mounted to said first and second axles and disposed to
slidably engage said first and second integral channels with
a bottom surface of said fixture disposed adjacent a lower
portion of said cylindrical wall of said bin.

2. The adapter for a bin, as described in Claim 1, wherein said dispenser, further
comprises a security link, said link flexibly attaching said retaining pin to said
dispenser so as to prevent loss of said pin.

3. The adapter for a bin as described in Claim 2, wherein said security link is selected
from the group comprising:
chain, wire, string, cord or flexible plastic rod.

REPLACEMENT SHEET

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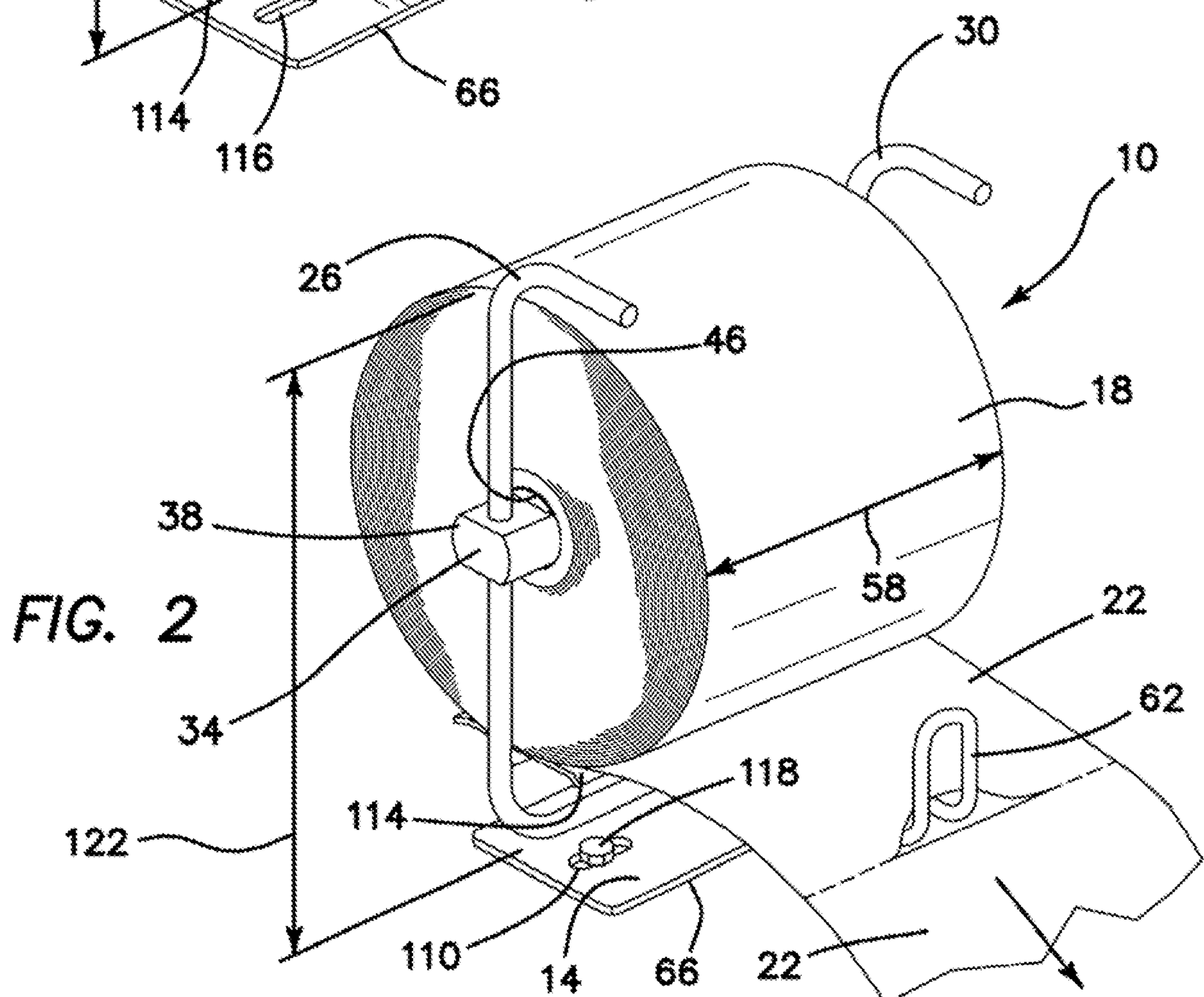
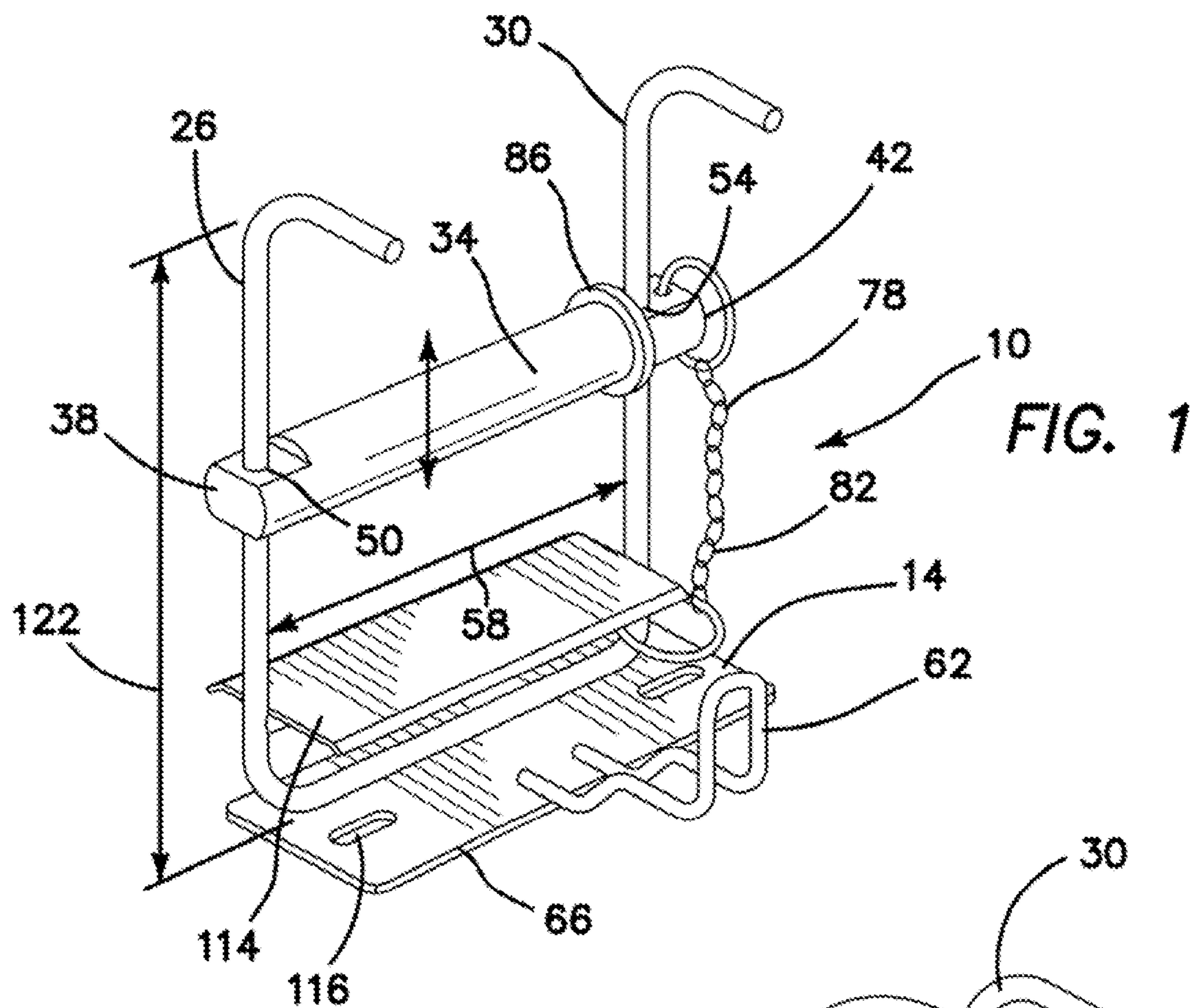
4. The adapter for a bin, as described in Claim 1, wherein said pin further comprises a collar, said collar being disposed adjacent said second end and being sized and shaped to prevent said pin from sliding completely into said core.
5. The adapter for a bin, as described in Claim 1, wherein said dispenser further comprises:
 - at least one aperture penetrating said planar base for mounting said base to said fixture; and
 - a raised platform, said platform being spaced upwardly from said base and providing clearance for securing at least one fastener through said aperture.
6. The adapter for a bin, as described in Claim 1, further comprising a bracket, said bracket being sized and shaped to secure said adapter to said bin.
7. The adapter for a bin, as described in Claim 1, wherein said dispenser further comprises a bag stream guide, said bag stream guide being attached adjacent said front edge of said planar base and spaced inwardly from said snagging hook.
8. The adapter for a bin, as described in Claim 6, wherein said bracket is an angled, rigid member sized and shaped to bear upon an upper surface of said fixture.

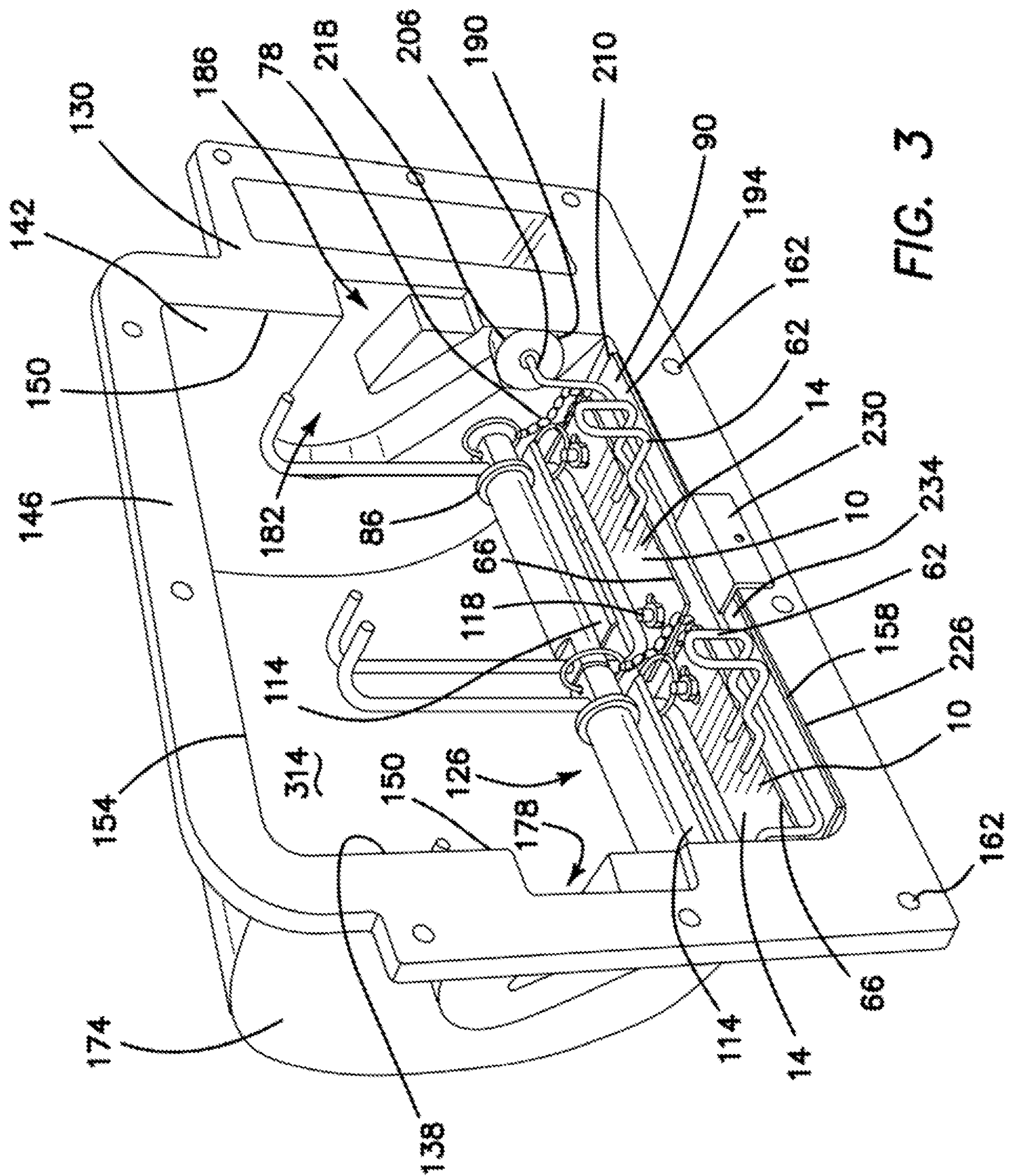
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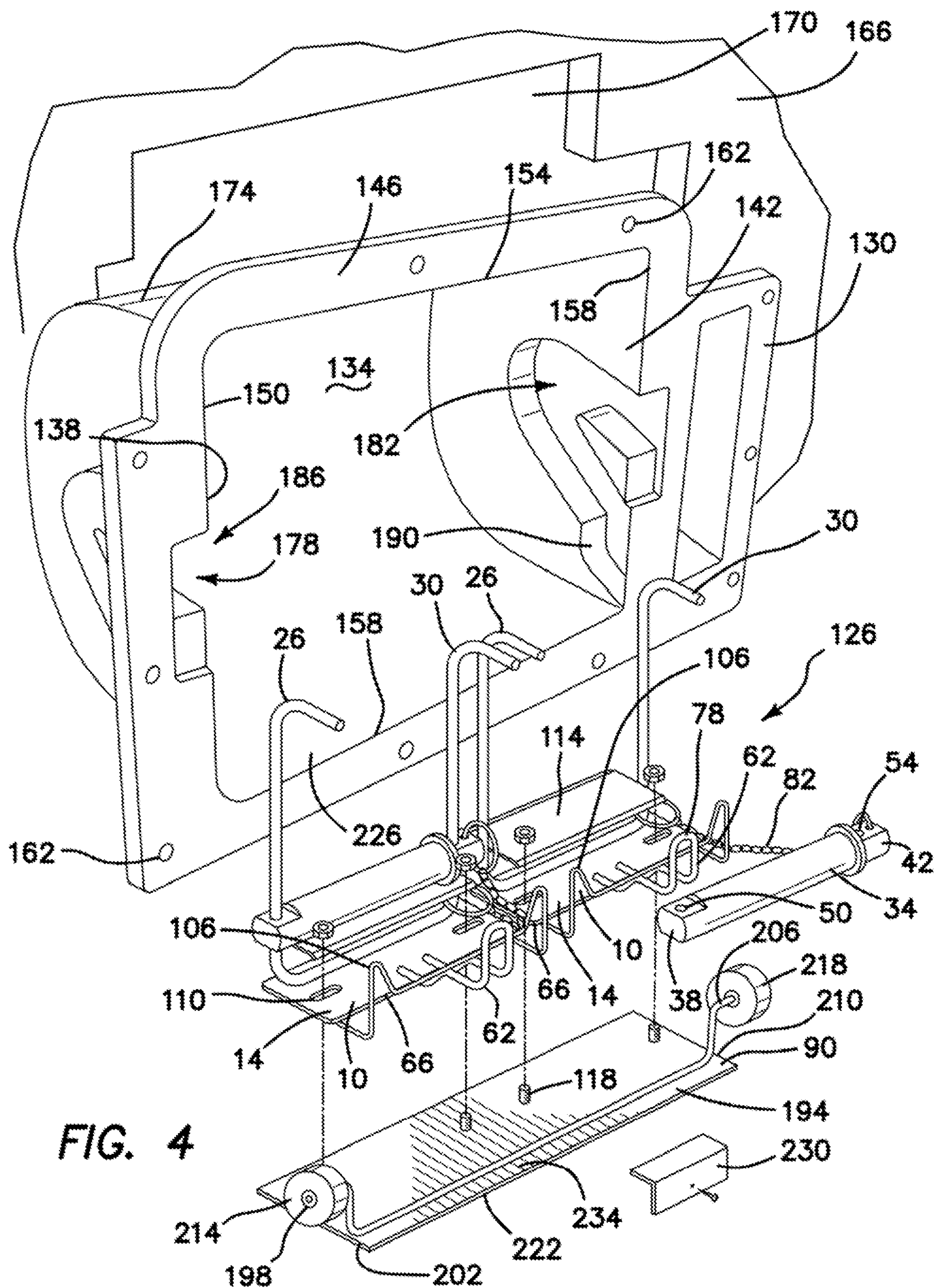
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9. The adapter for a bin, as described in Claim 1, wherein said first and second upwardly extending rods are curved to reduce a height of said dispenser.

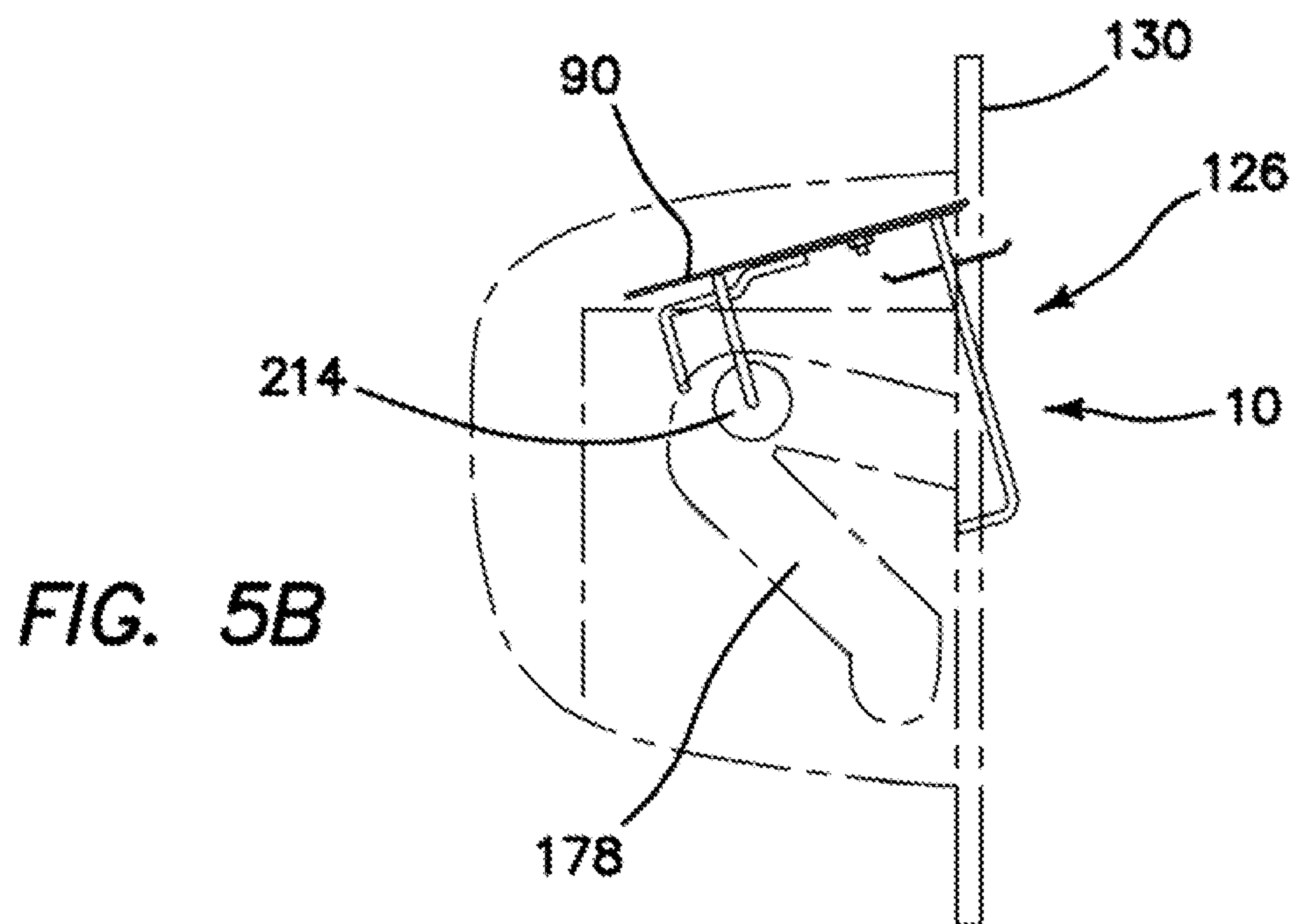
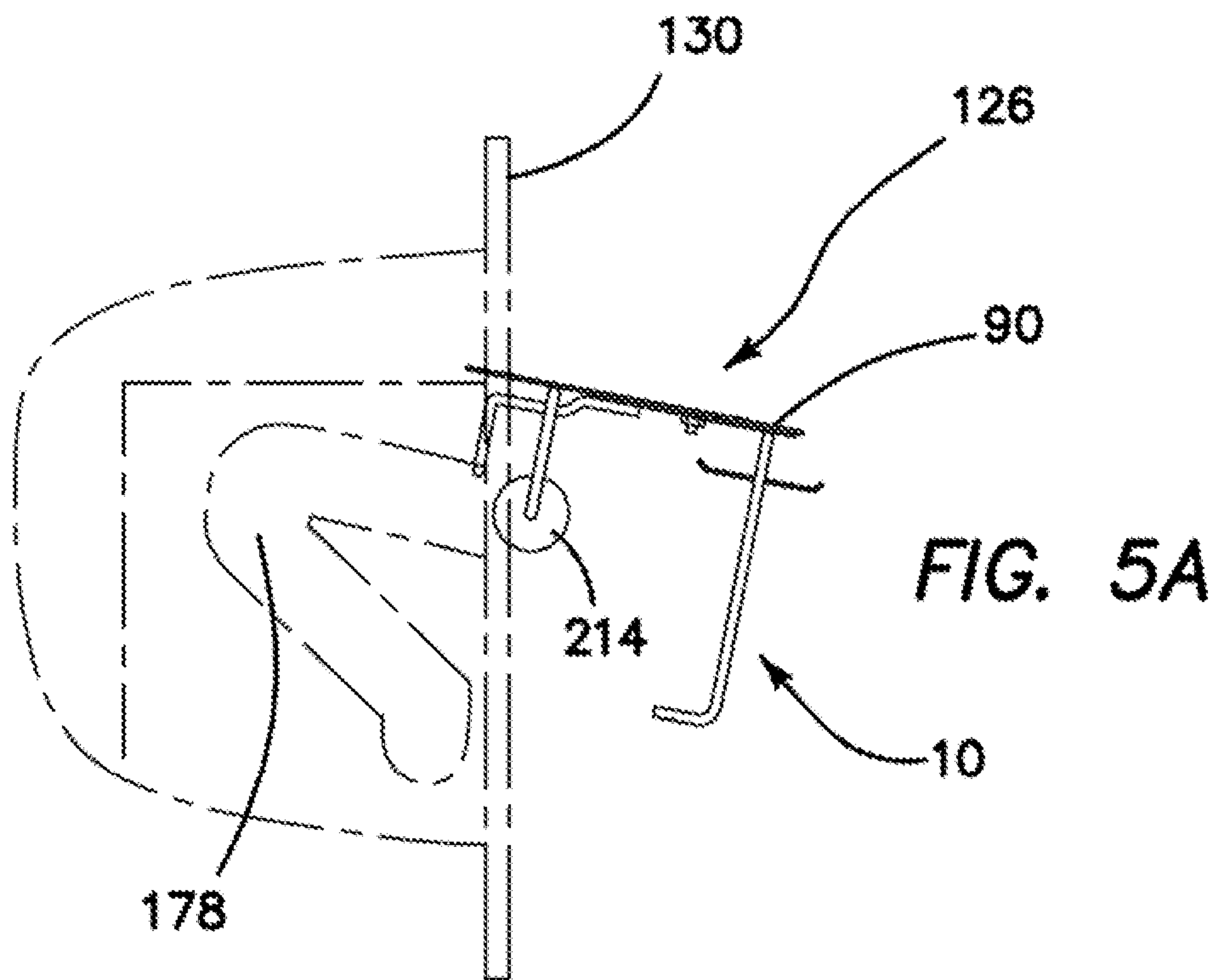
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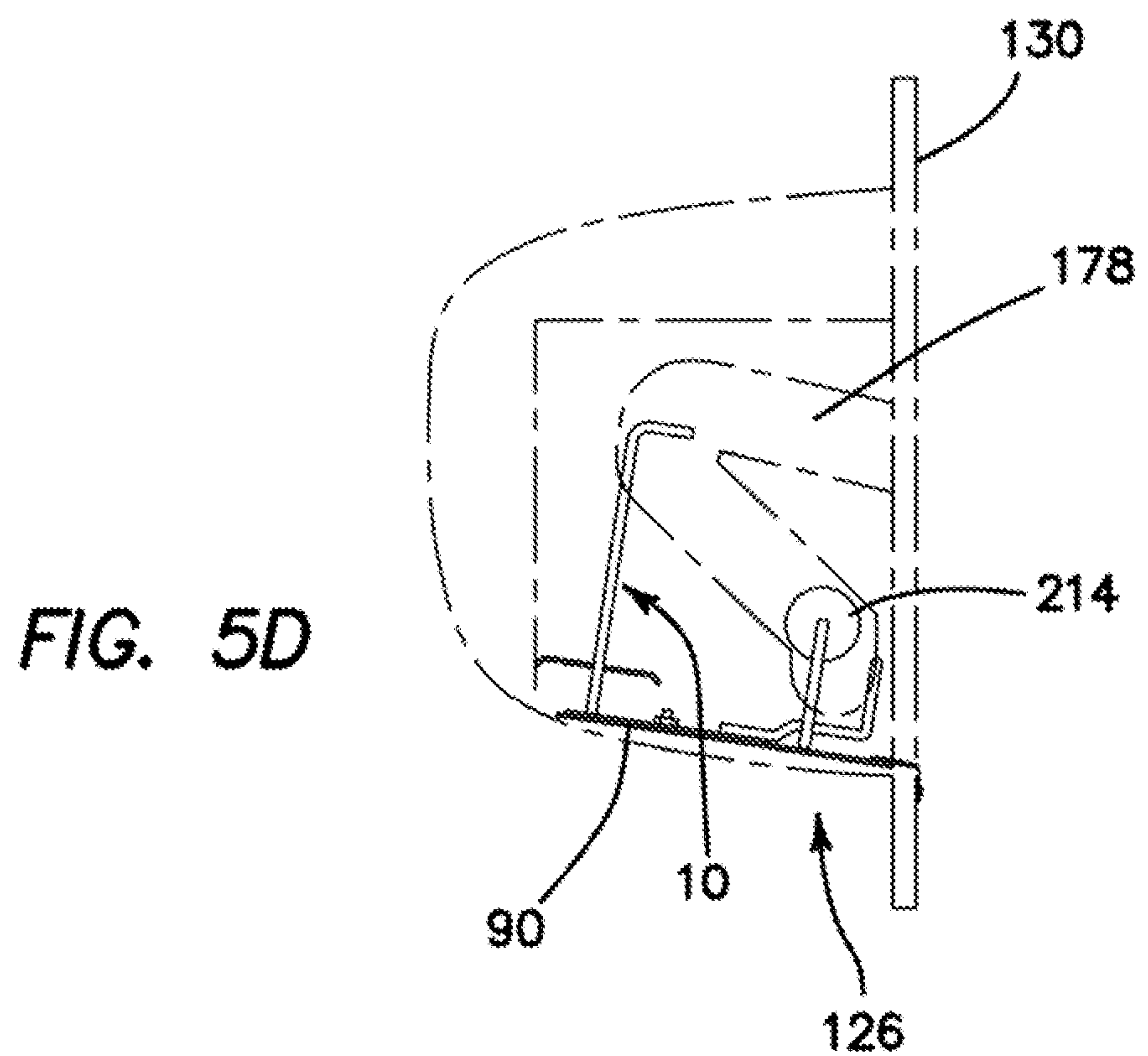
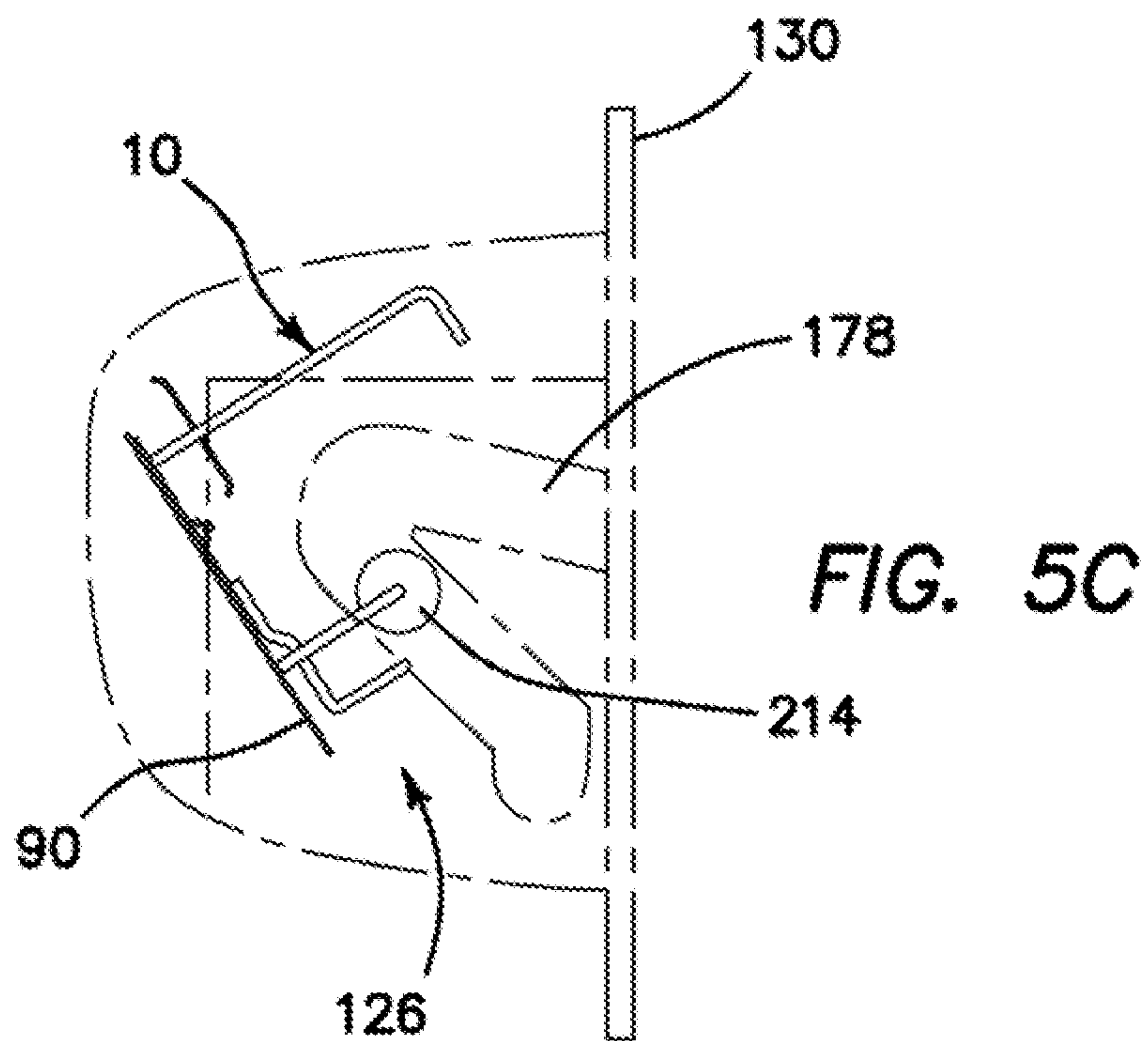




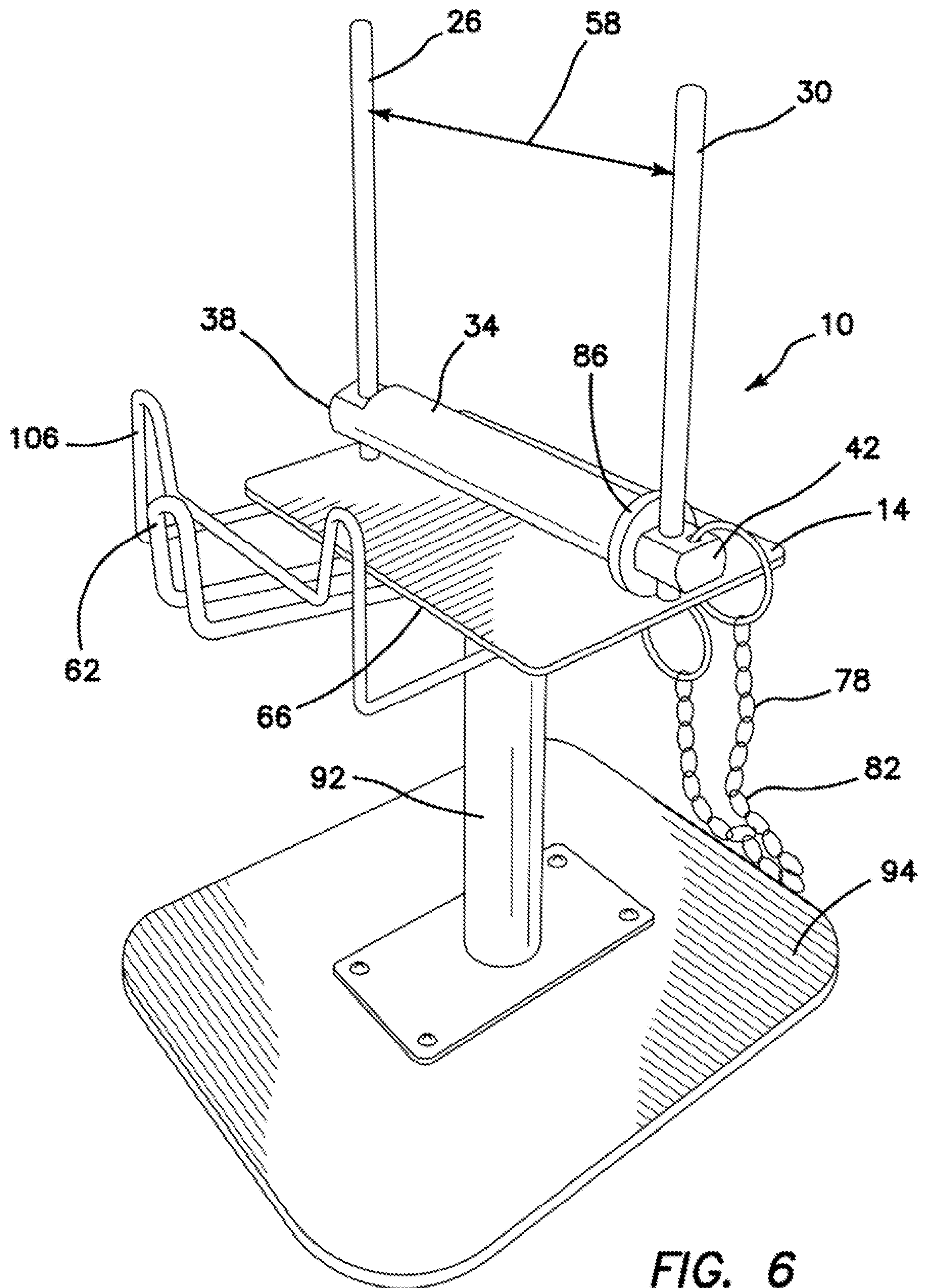
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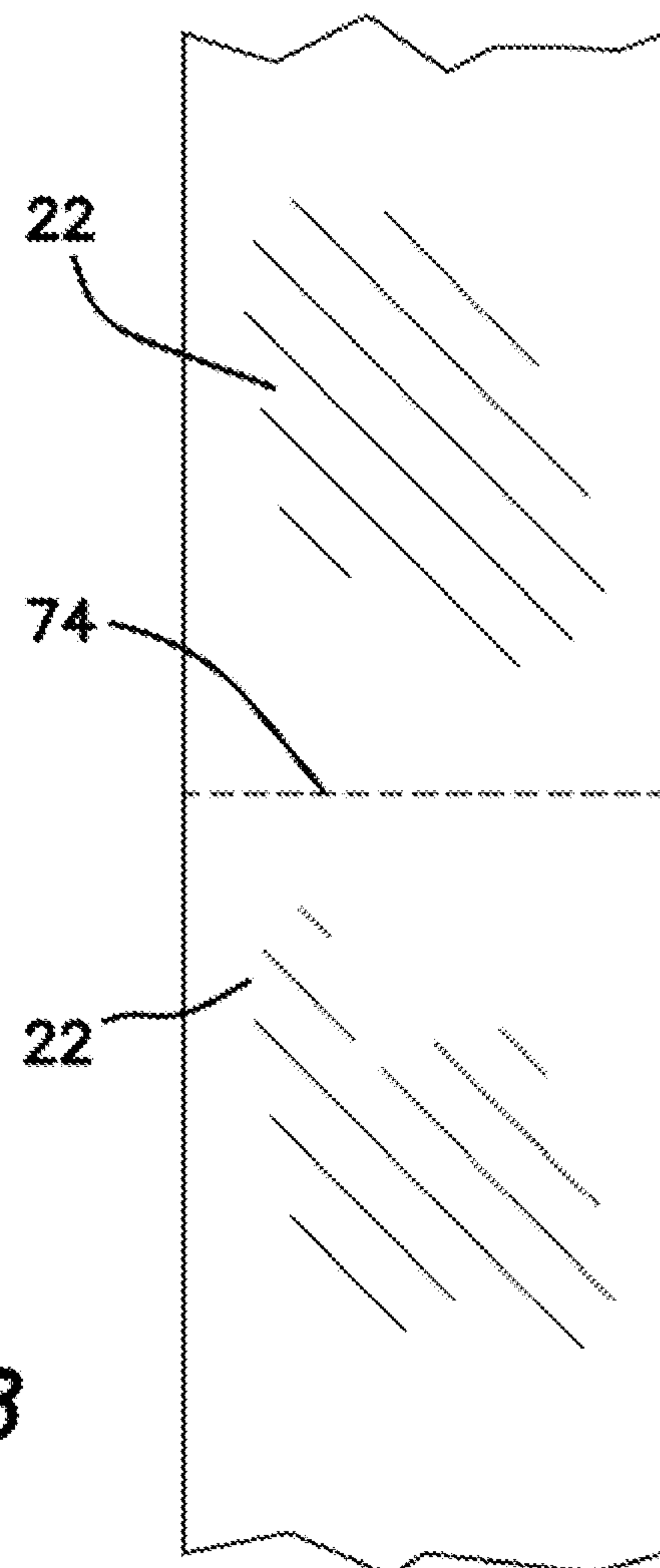
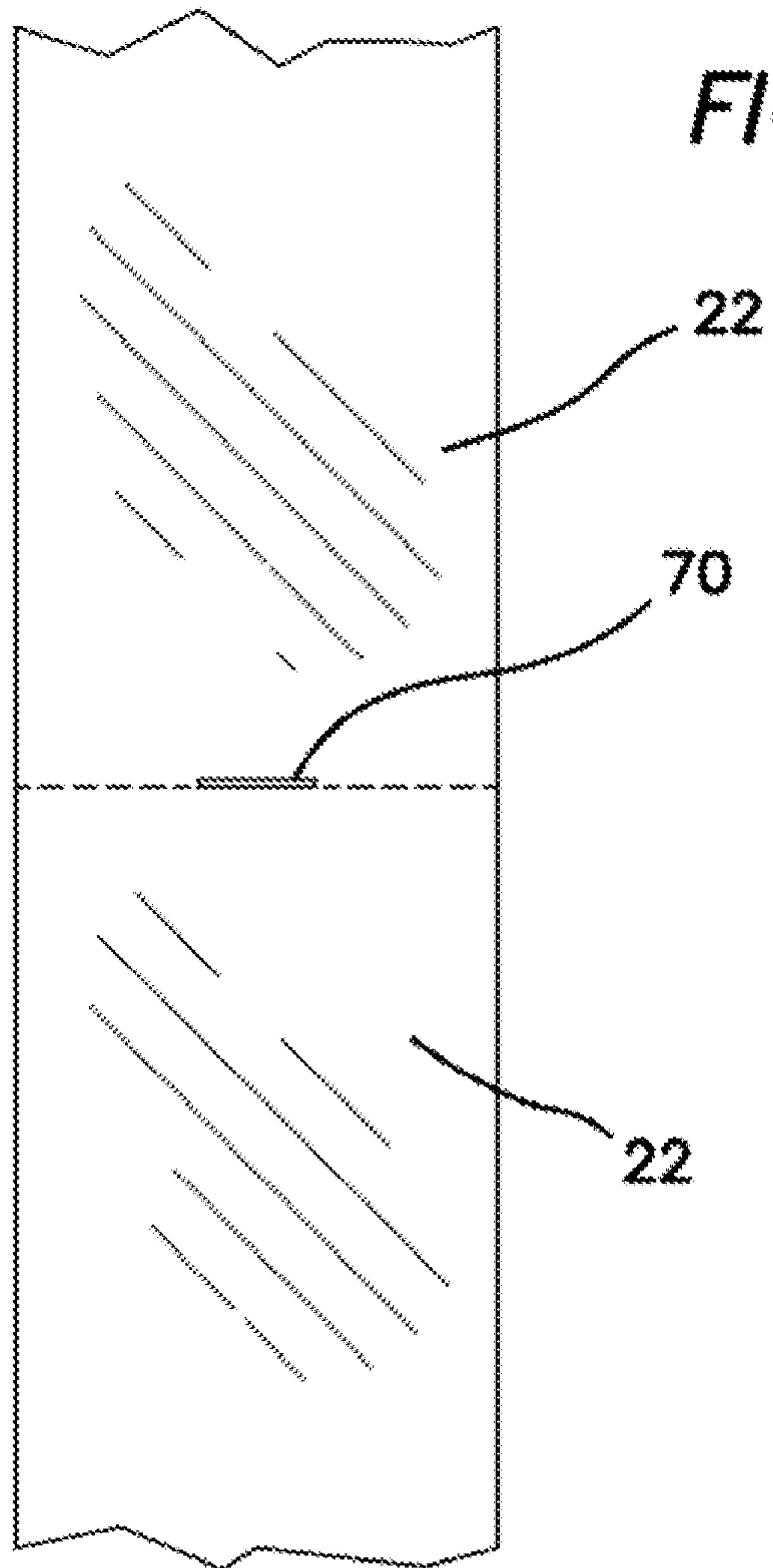
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**FIG. 8**

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FIG. 9A