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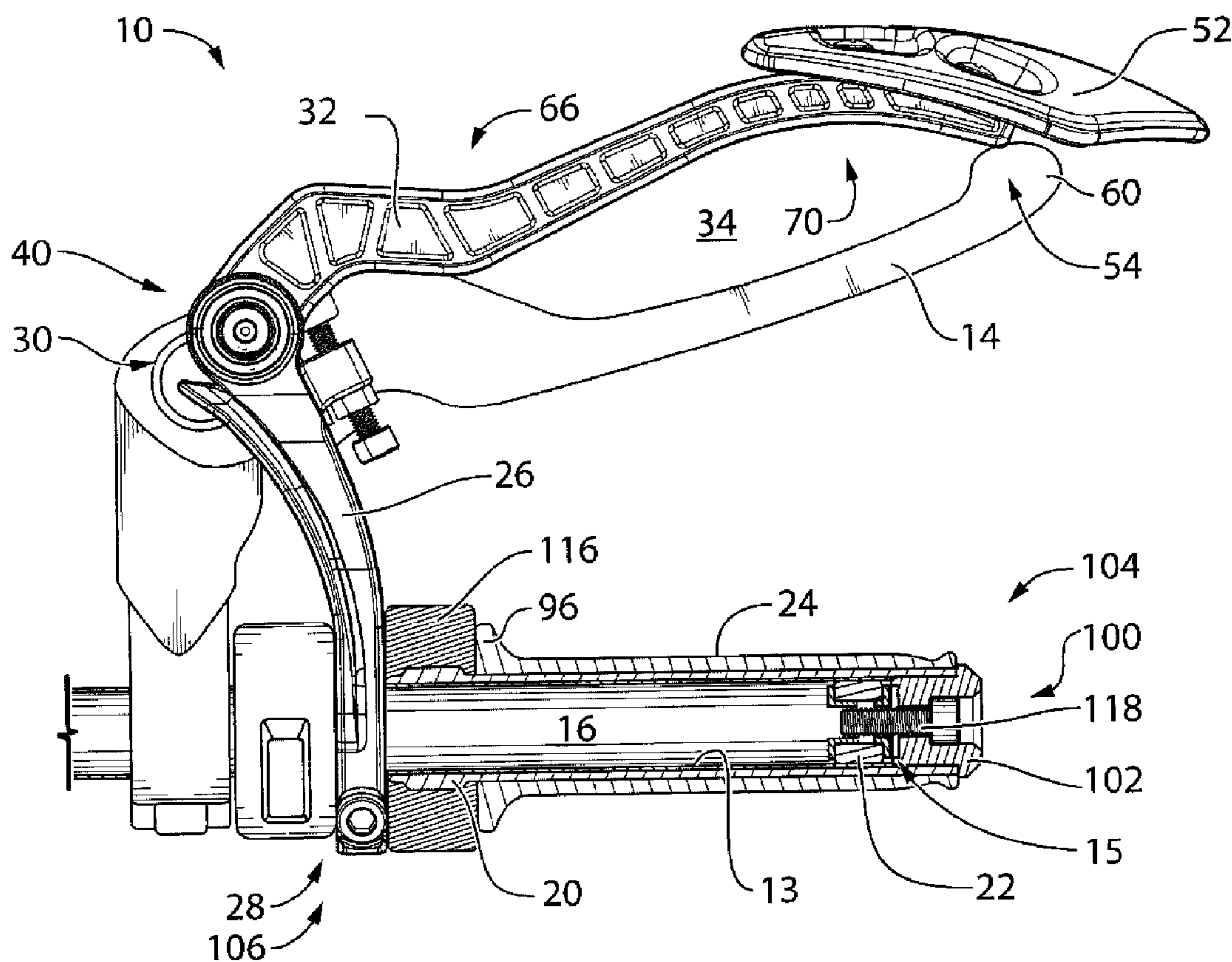
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(54) **Titre : PROTECTEUR DE LEVIER ET RALLONGE DE GUIDON POUR GUIDON DE MOTOCYCLETTE ET PROCÉDE D'INSTALLATION DE CEUX-CI**

(54) **Title: LEVER GUARD AND HANDLEBAR EXTENDER FOR MOTORCYCLE HANDLEBAR AND METHOD OF INSTALLING THE SAME**



(57) **Abrégé/Abstract:**

The present document describes a lever guard and handlebar extender kit for a motorcycle having a handlebar and a lever mounted thereon. The handlebar comprises a hollow portion having an open end, a handlebar grip and a handlebar end cap

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

mounted within the hollow portion and covering the open end. The kit comprises: a handlebar extender for replacing the handlebar end cap, the handlebar extender capable of adopting a plurality of positions between a retracted position and an extended position, any one of the plurality of positions providing an extension to the handlebar allowing displacement of the handlebar grip on the handlebar over the extension thereby providing additional space on the handlebar; and a lever guard for mounting to the handlebar using the additional space and, once mounted, the lever guard extending in front of the lever thereby providing substantial protection from objects coming toward the lever from the front.

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ABSTRACT

The present document describes a lever guard and handlebar extender kit for a motorcycle having a handlebar and a lever mounted thereon. The handlebar comprises a hollow portion having an open end, a handlebar grip and a handlebar end cap mounted within the hollow portion and covering the open end. The kit comprises: a handlebar extender for replacing the handlebar end cap, the handlebar extender capable of adopting a plurality of positions between a retracted position and an extended position, any one of the plurality of positions providing an extension to the handlebar allowing displacement of the handlebar grip on the handlebar over the extension thereby providing additional space on the handlebar; and a lever guard for mounting to the handlebar using the additional space and, once mounted, the lever guard extending in front of the lever thereby providing substantial protection from objects coming toward the lever from the front.

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LEVER GUARD AND HANDLEBAR EXTENDER FOR MOTORCYCLE HANDLEBAR AND METHOD OF INSTALLING THE SAME

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority of US provisional patent application no. 61/791,271, filed on March 15, 2013.

BACKGROUND

(a) Field

[0001] The subject matter disclosed generally relates to accessories for motorcycles. More particularly, the subject matter relates to lever guards and handlebar extenders for motorcycle handlebars.

(b) Related Prior Art

[0002] In circumstances such as in motorcycle track racing, proximity between racers may be such that inadvertent physical contacts may occur. In some cases, contacts between a racer, or a part of a competing motorcycle, and a control lever mounted on the handlebar, such as a brake lever or a clutch lever, of another motorcycle may occur.

[0003] For instance, tragic accidents sometimes result from a brake lever being triggered which suddenly applies a braking effect to the front wheel and projects the rider or racer forwardly on the racing track with very high velocity.

[0004] Furthermore, the outward extremity of the brake lever may be hit in the forward direction. This may transfer a torque force to the handlebar, leading to a sudden deviation from the current direction and potentially creating an accident.

[0005] Additionally, recreational motorcyclists are often challenged by obstacles near the roads where they are motorcycling. For example, in some states in the United States, motorcyclists may be allowed to drive between cars at red lights. Thus, many accidents may occur annually while brake levers or clutch levers of motorcycles are triggered by external elements near the roads (i.e., rear view mirrors of cars parked on the sideways, tree branches, and the

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like, for instance).

[0006] It is known in the art to provide hand guards or shields to prevent discomfort or injuries to hands or wrists of motorcyclist caused by projected matters, cold winds or squeezing between the handlebar and the control lever. However, these devices generally present one or more of the following limitations and drawbacks.

[0007] They do not implement sufficient rigidity and strength to prevent severe impacts to the control lever. They do not prevent an external force from being transferred in the forward direction from a lever extremity or from the protecting device itself to the handlebar. They are designed for use on motocross cycles so that they present a shape and size that would cause interference with the careening of a street racing motorcycle when the handlebar is brought near to its maximal turning angle, which therefore prevents use for such an application.

[0008] Moreover, devices of the prior art are not intended to prevent a driver's wrist from being retained in a space usually extending between the brake lever, the master cylinder and the handlebar should the driver be projected forwardly over the motorcycle.

[0009] Moreover, it is usually a challenge to position a lever guard between the front brake master cylinder/switch and the grip/throttle slider for motorcyclists.

[0010] There is therefore a need for a handlebar extender, a lever guard, a handlebar extender kit to be easily mounted on the handlebar of a motorcycle. There is also a need for a method of installing a handlebar extender and a lever guard on a handlebar.

SUMMARY

[0011] According to an embodiment, there is provided a lever guard and handlebar extender kit for a motorcycle having a handlebar and a lever mounted thereon, the handlebar comprising a hollow portion having an open end, a handlebar grip and a handlebar end cap mounted within the hollow portion and

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covering the open end, the kit comprising: a handlebar extender for replacing the handlebar end cap, the handlebar extender capable of adopting a plurality of positions between a retracted position and an extended position, any one of the plurality of positions providing an extension to the handlebar allowing displacement of the handlebar grip on the handlebar over the extension thereby providing additional space on the handlebar; and a lever guard for mounting to the handlebar using the additional space and, once mounted, the lever guard extending in front of the lever thereby providing substantial protection from objects coming toward the lever from the front.

[0012] According to an aspect, the handlebar further comprises an anchor installed within the hollow portion and wherein the handlebar extender comprises a bar end extension for adjustable attachment to the anchor.

[0013] According to an aspect, the bar end extension comprises: a main portion to be at least partially inserted within the hollow portion of the handlebar; and an lip portion extending from the main portion of the bar end extension and providing an abutment against which the handlebar grip will come into contact when displaced on the handlebar to cover the extension created by the handlebar extender.

[0014] According to an aspect, the handlebar extender further comprises a ring having a given length for installation between the anchor and the bar end extension, the given length corresponding to the extension, the ring thereby ensuring the extension that is required is respected.

[0015] According to an aspect, the main portion of the bar end extension comprise a cylindrical shape which matches a shape of the hollow portion of the handlebar.

[0016] According to an aspect, the handlebar extender further comprises a connector for attachment of the bar end extension to the anchor.

[0017] According to an aspect, at least one of the main portion and the lip portion are made of a rubber material.

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[0018] According to an aspect, the extension has a length of about 15 mm.

[0019] According to an aspect, the lever guard comprises: a first arm segment having a first end and a second end, the first arm segment to be mounted on the handlebar at its first end, the first arm segment extending from the handlebar; and a second arm segment extending from the second end of the first arm segment in front of the lever, the second arm segment providing the substantial protection from objects coming toward the lever from the front.

[0020] According to an aspect, at least one of the first arm segment and the second arm segment comprise ribs on a surface thereof providing enhanced rigidity.

[0021] According to an aspect, the kit further comprises a shield member mounted on the second arm segment, thereby allowing adjustment of an effective length of the second arm segment.

[0022] According to an aspect, the second arm segment comprises at least one opening about a distal end thereof, the shield member comprises at least one corresponding opening, the kit further comprising at least one connector for removably attaching the shield member about the distal end of the second arm segment using the at least one opening and the at least one corresponding opening.

[0023] According to an aspect, the shield member defines a surface, the surface defining at least one of: a curved shape and at least one projection, thereby reducing possible deflections of the lever under pressure effects caused by one of: wind and a careening element.

[0024] According to an aspect, at least one of: the first arm segment, the second arm segment and the shield member is made from at least one of: a metallic material, a composite material, aerospace grade aluminum and a carbon fiber reinforced composite material.

[0025] According to an aspect, the lever guard further comprises at least one of: a mirror, a lamp, a camera, and a blinker mounted on at least one of: the

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first arm segment, the second arm segment and the shield member.

[0026] According to an aspect, the lever guard further comprises an articulated joint for articulably joining the first arm segment and the second arm segment, the articulated joint for at least one of: allowing the second arm segment to abut in a rest position to resist forces applied thereto in a direction facing the handlebar and enabling a displacement of the second arm segment relative to the first arm segment in a direction away from the handlebar.

[0027] According to an aspect, the lever guard further comprises a user adjustable stop member assembly for allowing adjustment of a space between the lever and the second arm segment.

[0028] According to an embodiment, there is provided a method for installing a lever guard on a motorcycle having a handlebar and a lever mounted thereon, the handlebar comprising a hollow portion having an open end and a handlebar grip, the method comprising: installing a handlebar extender within the hollow portion to create an extension to the handlebar; sliding the handlebar grip over the extension to create additional space on the handlebar; and installing the lever guard on the handlebar after the handlebar grip using the additional space.

[0029] According to an aspect, the method further comprises removing a handlebar end cap mounted within the hollow portion prior to installing the handlebar extender.

[0030] According to an aspect, the method further comprises moving other components installed on the handlebar prior to installing the lever guard.

[0031] Features and advantages of the subject matter hereof will become more apparent in light of the following detailed description of selected embodiments, as illustrated in the accompanying figures. As will be realized, the subject matter disclosed and claimed is capable of modifications in various respects, all without departing from the scope of the claims. Accordingly, the drawings and the description are to be regarded as illustrative in nature, and not as restrictive and the full scope of the subject matter is set forth in the claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

[0032] Further features and advantages of the present disclosure will become apparent from the following detailed description, taken in combination with the appended drawings, in which:

[0033] Fig. 1 is a cross-sectional view of a handlebar in accordance with an embodiment, showing an exploded view of a handlebar extender;

[0034] Fig. 2 is a cross-sectional view of a handlebar in accordance with another embodiment, showing a handlebar extender in an extended position relative to the handlebar and a lever guard adjacent a front brake lever;

[0035] Fig. 3 is a perspective view of a lever guard mounted on a handlebar in accordance with another embodiment;

[0036] Fig. 4 is a front elevation view of a lever guard mounted on a handlebar which has a front brake lever in accordance with another embodiment;

[0037] Fig. 5 is a perspective view of a lever guard mounted on a handlebar in accordance with another embodiment;

[0038] Fig. 6A illustrates a handlebar extender in accordance with an embodiment;

[0039] Fig. 6B illustrates a handlebar extender in accordance with another embodiment; and

[0040] Fig. 6C illustrates a handlebar extender in accordance with yet another embodiment.

[0041] It will be noted that throughout the appended drawings, like features are identified by like reference numerals.

DETAILED DESCRIPTION

[0042] In embodiments, there are disclosed lever guards, handlebar extenders for handlebars (i.e., such as bike, or motorcycle handlebars), lever guard and handlebar extender kits for handlebars (i.e., such as bike, or motorcycle handlebars) and methods of installing the same on handlebars (i.e., such as bike, or motorcycle handlebars).

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[0043] Referring now to the drawings, and more particularly to Figs. 1 to 5, there are shown lever guards **10** according to embodiments.

[0044] According to different embodiments, Figs. 2-5 show a lever guard **10** adapted to be mounted on a handlebar **12** (i.e., such as bike, or motorcycle handlebars **12**) of a motorcycle (not shown). As shown, the handlebar **12** has a lever **14** mounted on the handlebar **12** of the motorcycle. The handlebar **12** includes a hollow portion **16** which has an open end **18**, a throttle slider **20**, an anchor **22** which is mounted within the hollow portion **16** and a handlebar grip **24**.

[0045] The lever guard **10** includes a first arm segment **26** which has a first end **28** and a second end **30**. The first arm segment **26** is mounted (i.e., removably mounted) on the handlebar **12** at its first end **28**. The first arm segment **26** extends upwardly and outwardly from the handlebar **12**. The lever guard **10** further includes a second arm segment **32** which extends from the second end **30** of the first arm segment **26**. According to an embodiment, the second arm segment **32** extends substantially perpendicularly from the second end **30** of the first arm segment **26**. The first arm segment **26** and the second arm segment **32** are configured to provide, once installed on the handlebar **12**, a protective space **34** between the second arm segment **32** and the lever **14** mounted on the handlebar **12**.

[0046] According to an embodiment, the first arm segment **26**, at its second end **30**, includes a stop member assembly **72**. The second end **30** of the first arm segment **26** is assembled to a proximal end **38** of the second arm segment **32** through an articulated joint **40**.

[0047] It is to be noted that the first arm segment **26** and the second arm segment **32** may be connected or removably connected together using any suitable connectors (i.e., screws, and the like).

[0048] According to an embodiment, the lever guard **10** may further include a handlebar mounting device **42** at the first end **28** of the first arm segment **26** for providing a removable connection of the lever guard **10** to the handlebar **12**. The

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handlebar mounting device **42** may include a lower jaw portion **44** which defines a semi-circular cavity for mating with a lower portion **46** of the handlebar **12**. The lower jaw portion **44** is assembled to a top jaw portion **48** defining a complementary second cavity which uses any suitable connectors, such as, without limitation, tightening machine screws **50a** and **50b**, to provide a stable and rugged mounting of the lever guard **10** on the handlebar **12**.

[0049] According to one embodiment, and as shown in Figs. 2, 3 and 4, the lever guard **10** may further include a shield member **52** mounted at a distal end **54** of the second arm segment **32**, thereby allowing adjustment of an effective length of the second arm segment **32**.

[0050] According to one embodiment, the longitudinal position of the shield member **52** on the second arm segment **32** may be adjustable by connectors, such as, without limitation, sliding machine screws **56a** and **56b**, to a desired position into and along the slot **58** and tightening them to lock the shield member **52** in that position.

[0051] According to another embodiment, and still referring to Figs. 2, 3 and 4, alternatively, a specific slot may be provided for each screw, which may increase rigidity and mechanical resistance of the shield member **52**. Thus, the effective length of the second arm segment **32** may be adjusted so that the surface of the shield member **52** may be properly aligned with a distal extremity **60** of the lever **14** or control lever **14** (i.e., without limitation, a clutch lever, a brake lever and the like) (see Fig. 4) to prevent external objects or a careening element **62** (i.e., without limitation, another motorbike, a body part of another competitor, a tree branch, a car mirror and the like) from hitting or contacting the lever **14**.

[0052] It is to be noted that a proper adjustment of the positioning of the shield member **52** may also be critical to prevent from exceeding the extremity of the lever **14**, which would undesirably increase risks of interference with the careening element **62** within the external environment.

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[0053] The shield member **52** may be configured according to different sizes and configurations for preventing impacts to the lever **14** and protecting the driver's hand from being impacted by external objects or a careening element **62** or squeezed between the lever **14** and the handlebar **12**.

[0054] According to an embodiment, the surface of the shield member **52** may also be configured to reduce possible deflection of the brake lever **14** under the aerodynamic pressure effects caused by the wind when the motorcycle is being driven at racing speeds that can reach as high as 300km/h. For example, the surface of the shield member **52** may be curved or may include outward projections such as to reduce air turbulence around the shield member **52** and the lever guard **10** in general.

[0055] It is also to be mentioned that the first arm segment **26** and second arm segment **32** may define a substantially lean profile to minimize the effect of the wind causing a repulsive force thereon, which is a function of the area and shape of the lever guard surface. Such a force at high speed may create undesirable torque on the handlebar **12** especially if the lever guard **10** is mounted on the brake lever side only.

[0056] According to an embodiment, and as best shown in Fig. 4, the second arm segment **32** may further define a first curvilinear intermediate portion **64** defining a concave recessed portion **66** in a direction opposite to the handlebar **12**. The purpose of the concave recessed portion **66** is to prevent interference of the second arm segment **32** with a careening element **62** (i.e., on a street or racing motorcycle) when the handlebar **12** is being pivoted near its maximum angular position, moving the lever guard **10** close to the careening element **62**.

[0057] According to an embodiment, and still referring to Fig. 4, the second arm segment **32** may further define a second curvilinear intermediate portion **68** defining a second recessed portion opening **70** in the direction of the handlebar **12** to provide a clearance for the rider's hand between the lever **14** and the second arm segment **32**.

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[0058] According to an embodiment, the position of the second arm segment **32** and the resulting clearance may be adjusted through a user adjustable stop member assembly **72**.

[0059] According to an embodiment, the user adjustable stop member assembly **72** may include a flange **74** defined at the second end **30** of the first arm segment **26**. The flange **74** is provided with a threaded hole for receiving a threaded stop member **78**, such as a machine screw, which may be lockable at a user selected depth in the threaded hole using a nut **80**, to set the position of the seat **82** on which the proximal end **38** of the second arm segment **32** abuts in a rest position to resist forces applied thereto in the direction of the handlebar **12**.

[0060] According to an embodiment, the articulated joint **40** is defined by mating fork shaped drilled ends **86** and **88** of first arm segment **26** and second arm segment **32** pivotally assembled about an axle **90**. The articulated joint **40** is a single axis joint which enables displacement of the second arm segment **32** away from the user adjustable stop member assembly **72** in a direction opposite to the handlebar **12**. A coil spring **92** is mounted in the articulated joint **40** to provide a biasing force holding the second arm segment **32** against the seat **82** of the user adjustable stop member assembly **72** in its rest position when no external force is applied thereto.

[0061] According to an embodiment, the second arm segment **32** may adopt different angular positions with respect to the first arm segment **26** under the action of a force applied in a direction opposite to the handlebar mounting device **42**, and may resume into its rest position when the force is withdrawn. Thus, a twofold protection is provided: 1) the lever guard **10** prevents forces and impacts applied in the handlebar **12** direction from contacting the lever **14** and causing undesired operation of the lever **14** (i.e., brake lever or clutch lever) and 2) a force applied in the opposite direction causes the lever guard **10** to collapse forwardly thus preventing torque from being transferred to the handlebar **12** to interfere with the motorcycle steering operation.

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[0062] According to an embodiment, the second arm segment **32** (with or without shield member **52**) may also help in protecting the motorbike since it takes the hardest portion of the hit when the bike goes down and limits bike damages (i.e., damages on the front brake master cylinder **94**, lever **14**, gas tank (not shown) and the like).

[0063] The lever guard **10** associated with a spring-back collapsible lever further prevents hand and/or wrist injuries when the rider is being projected forwardly. It can also be seen on Fig. 4 that the lever guard **10**, which has its handlebar mounting device **42** and first arm segment **26** strategically located between the throttle handle **96** and the front brake master cylinder **94**, reduces the presence of an open space between the handlebar **12**, the front brake master cylinder **94** and the brake lever **14** to prevent a driver's wrist from being retained in that space in the event of a forward projection of the driver.

[0064] According to an embodiment, first arm segment **26** and second arm segment **32** may be made of, without limitation, a metallic material, a composite material and the like, to impart the required high rigidity in spite of their desirable lean profile and light weight.

[0065] According to an embodiment, the first arm segment **26** and second arm segment **32** may be made of a material capable of resisting forces applied at about a 30km/h speed differential between a first motorcyclist and a second motorcyclist for example, or between a first motorcyclist and a careening element **62**.

[0066] According to an embodiment, the shield member **52** must also be rigid and impact resistant.

[0067] According to an embodiment, the shield member **52** may be molded integrally with the second arm segment **32**. However, it is to be noted that, according to another embodiment, the shield member **52** is made of a material which includes metal or a highly resistant composite material as a separate and adjustable unit.

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[0068] It is also to be noted that the lever guard **10** may protect the front brake master cylinder **94**, but also protect the gas/oil reservoir (not shown) or reduce the chances of losing the optimized axle of the motorcycle during a competition. Indeed, the high rigidity of the lever guard **10** enables the motorcycle to be supported on the lever guard **10** thus preventing delicate components of the motorcycle from hitting the ground in the event of a crash. In order to provide additional rigidity to the first arm segment **26** and second arm segment **32**, ribs **53** are provided (e.g., molded) one of more side thereof.

[0069] To meet high mechanical stress requirements, the lever guard **10** has a sturdy construction and can be made from aerospace grade aluminum and carbon fiber reinforced composite material to optimize its strength/weight ratio.

[0070] According to another embodiment, the clutch lever (not shown) may also be protected by a lever guard **10** in a similar fashion as the brake lever **14**.

[0071] According to another embodiment, and referring now to Figs. 1, 2, 6A, 6B and 6C, there is shown a handlebar extender **100**. The handlebar extender **100** includes a bar end extension **102** to be attached to the anchor **22** through the open end **18** (within the hollow portion **16** defined by the handlebar wall **13**). The bar end extension **102** is capable of adopting multiple positions between an extended position (Fig. 2) and a retracted position (Fig. 1). The extended position provides an extension **104** externally from the open end **18** of the handlebar **12**, thereby allowing the handlebar grip **24** and the throttle slider **20** to be displaced away from the open end **18** on the handlebar wall **13** of the handlebar **12** for providing additional space **106** (corresponding to extension **104**) for receiving the lever guard **10** on the handlebar **12**.

[0072] More particularly, in Fig. 1, there is shown that the handlebar extender **100** is for releasably attachment to the anchor **22** disposed at an end **15** of the handlebar **12** within the hollow portion **16**.

[0073] According to an embodiment, the bar end extension **102** may include a main portion **108**, which defines a hollow space **110**, to be at least partially

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inserted within the hollow portion **16** of the handlebar **12**. The bar end extension **102** may further include an lip portion **112** extending from the main portion **108** of the bar end extension **102** for providing an abutment against which the handlebar grip **24** and the throttle slider **20** will come into contact when displaced on the handlebar **14** to cover the extension **104** created by the handlebar extender **100**.

[0074] It is to be noted that the main portion **108** and the lip portion **112** of the bar end extension **102** may be of a cylindrical shape such as to best suit with the hollow cylindrical shape of the handlebar **12**.

[0075] According to an embodiment, the handlebar extender **100** may be a rubber expander or any other suitable expander which may be inserted in the hollow portion **16** of a handlebar **12**.

[0076] It is to be noted that, often, the anchor **22** is normally previously mounted within a handlebar **12**. The handlebar extender **100** includes a bar end extension **102** which is for attachment to the anchor **22** to create an extension **104** of about 15mm, or any other extension needed. The lever guard **10** may then be connected to the handlebar **12** without difficulty. The lever guard **10** may then be positioned between the front brake master cylinder **94** / switch **114** and the throttle slider **20** / handlebar grip **24**.

[0077] It is to be noted that the throttle housing **116** may be displaced with the handlebar grip **24** and the throttle slider **20** when the bar end extension **102** is at any position between the unextended position and the extended position. For allowing the reception of the lever guard **10** or any other suitable device on the handlebar **12**, the handlebar extender **100** may allow for a displacement of the handlebar grip **24** with the throttle slider **20** of a length of about 15 mm.

[0078] Referring now to Figs. 6A, 6B and 6C, there are shown handlebar extenders **100** in accordance with other embodiments. There are shown different possibilities of connecting or mounting the bar end extension **102** to the anchor **22** or within the hollow portion **16** (or to any other suitable fixed part or portion of the handlebar **12**). For example, a retaining wall may be supported by the

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extremity of the handlebar **12** to create a fixed space of 15mm.

[0079] The handlebar extender **100** may further include a connector **118** for attachment of the anchor **22** and the bar end extension **102**. The connector **118** may be a screw or any other suitable connector or fastening device such as to connect the handlebar extender **100** to the handlebar **12** of the motorbike.

[0080] It is to be noted that the lever guard **10** and the handlebar extender **100** may fit on any suitable handlebar **12**. More particularly, the lever guard **10** and the handlebar extender **100** may fit on a standard handlebar having a 22 mm external diameter.

[0081] According to an embodiment, there is provided a ring **55** between the anchor **22** and the bar end extension **102**. The ring **55** can be of different lengths according to the extension **104** and conversely the additional space **106** which is required. According to an embodiment, the ring **55** has a given length which corresponds to the extension **104**. The ring **55** thereby ensures that the extension **104** that is required is respected. It is envisaged that a lever guard and handlebar extender kit would include rings **55** of different lengths to take into account the varying needs for additional space **106** that would be required on handlebars **12** of different motorcycles.

[0082] According to another embodiment, there is provided a method for installing a lever guard **10** on a handlebar **12** having a throttle slider **20**, a handlebar grip **24**, a switch **114** and a front brake master cylinder **94** installed thereon. The method includes the steps of removing the existing handlebar end cap; installing a handlebar extender **100** at an end **15** of the handlebar **12** to create an extension **104**; sliding the throttle slider **20** and the handlebar grip **24** over the extension **104** to create additional space **106** opposite the extension **104**; moving the other components installed on the handlebar; and installing a first end **28** of the lever guard **10** on the handlebar **12** after any one of: the switch **114**, the front brake master cylinder **94** and the throttle housing **116**.

[0083] In use, a motorcyclist slides or displaces the handlebar extender **100**

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away from the handlebar **12** to create an extension **104** and can then slide the throttle slider **20** and the handlebar grip **24** on the extension **104** created to provide additional space **106** to mount a device such as the lever guard **10** described above between one of the switch **114** and the front brake master cylinder **94** (which do not move relative to the handlebar **12**) and the throttle housing **116**, the throttle slider **20** and the handlebar grip **24**.

[0084] According to other embodiments (not shown), accessories may be mounted on or near the lever guard **10**. The accessories may include a rear view mirror, blinkers, a camera (such as a GoPro® Camera and the like), and a LED fog lamp. It is to be noted that the accessories may be mounted on the first arm segment **26**, the second arm segment **32** and/or the shield member **52**. The rear view mirror may also be part of the shield member **52**.

[0085] It is to be noted that the lever guard **10** and the handlebar extender **100** may be positioned on one side only of the motorcycle or on both sides (i.e., one side for the clutch lever and one side for the brake lever).

[0086] While preferred embodiments have been described above and illustrated in the accompanying drawings, it will be evident to those skilled in the art that modifications may be made without departing from this disclosure. Such modifications are considered as possible variants comprised in the scope of the disclosure.

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CLAIMS:

1. A lever guard and handlebar extender kit for a motorcycle having a handlebar and a lever mounted thereon, the handlebar comprising a hollow portion having an open end, a handlebar grip and a handlebar end cap mounted within the hollow portion and covering the open end, the kit comprising:

- a handlebar extender for replacing the handlebar end cap, the handlebar extender capable of adopting a plurality of positions between a retracted position and an extended position, any one of the plurality of positions providing an extension to the handlebar allowing displacement of the handlebar grip on the handlebar over the extension thereby providing additional space on the handlebar; and
- a lever guard for mounting to the handlebar using the additional space and, once mounted, the lever guard extending in front of the lever thereby providing substantial protection from objects coming toward the lever from the front.

2. The kit of claim 1, wherein the handlebar further comprises an anchor installed within the hollow portion and wherein the handlebar extender comprises a bar end extension for adjustable attachment to the anchor.

3. The kit of claim 2, wherein the bar end extension comprises:

- a main portion to be at least partially inserted within the hollow portion of the handlebar; and
- an lip portion extending from the main portion of the bar end extension and providing an abutment against which the handlebar grip will come into contact when displaced on the handlebar to cover the extension created by the handlebar extender.

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4. The kit of claim 3, wherein the handlebar extender further comprises a ring having a given length for installation between the anchor and the bar end extension, the given length corresponding to the extension, the ring thereby ensuring the extension that is required is respected.
5. The kit of claim 3, wherein the main portion of the bar end extension comprise a cylindrical shape which matches a shape of the hollow portion of the handlebar.
6. The kit of claim 3, wherein the handlebar extender further comprises a connector for attachment of the bar end extension to the anchor.
7. The kit of claim 3, wherein at least one of the main portion and the lip portion are made of a rubber material.
8. The kit of claim 1, wherein the extension has a length of about 15 mm.
9. The kit of claim 1, wherein the lever guard comprises:
 - a first arm segment having a first end and a second end, the first arm segment to be mounted on the handlebar at its first end, the first arm segment extending from the handlebar; and
 - a second arm segment extending from the second end of the first arm segment in front of the lever, the second arm segment providing the substantial protection from objects coming toward the lever from the front.

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10. The kit of claim 9, wherein at least one of the first arm segment and the second arm segment comprise ribs on a surface thereof providing enhanced rigidity.

11. The kit of claim 9, further comprising a shield member mounted on the second arm segment, thereby allowing adjustment of an effective length of the second arm segment.

12. The kit of claim 11, wherein the second arm segment comprises at least one opening about a distal end thereof, the shield member comprises at least one corresponding opening, the kit further comprising at least one connector for removably attaching the shield member about the distal end of the second arm segment using the at least one opening and the at least one corresponding opening.

13. The kit of claim 11, wherein the shield member defines a surface, the surface defining at least one of: a curved shape and at least one projection, thereby reducing possible deflections of the lever under pressure effects caused by one of: wind and a careening element.

14. The kit of claim 11, wherein at least one of: the first arm segment, the second arm segment and the shield member is made from at least one of: a metallic material, a composite material, aerospace grade aluminum and a carbon fiber reinforced composite material.

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15. The kit of claim 11, wherein the lever guard further comprises at least one of: a mirror, a lamp, a camera, and a blinker mounted on at least one of: the first arm segment, the second arm segment and the shield member.

16. The kit of claim 9, wherein the lever guard further comprises an articulated joint for articulably joining the first arm segment and the second arm segment, the articulated joint for at least one of: allowing the second arm segment to abut in a rest position to resist forces applied thereto in a direction facing the handlebar and enabling a displacement of the second arm segment relative to the first arm segment in a direction away from the handlebar.

17. The kit of claim 16, wherein the lever guard further comprises a user adjustable stop member assembly for allowing adjustment of a space between the lever and the second arm segment.

18. A method for installing a lever guard on a motorcycle having a handlebar and a lever mounted thereon, the handlebar comprising a hollow portion having an open end and a handlebar grip, the method comprising:

- installing a handlebar extender within the hollow portion to create an extension to the handlebar;
- sliding the handlebar grip over the extension to create additional space on the handlebar; and
- installing the lever guard on the handlebar after the handlebar grip using the additional space.

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19. The method of claim 18, further comprising removing a handlebar end cap mounted within the hollow portion prior to installing the handlebar extender.

20. The method of claim 19, further comprising moving other components installed on the handlebar prior to installing the lever guard.

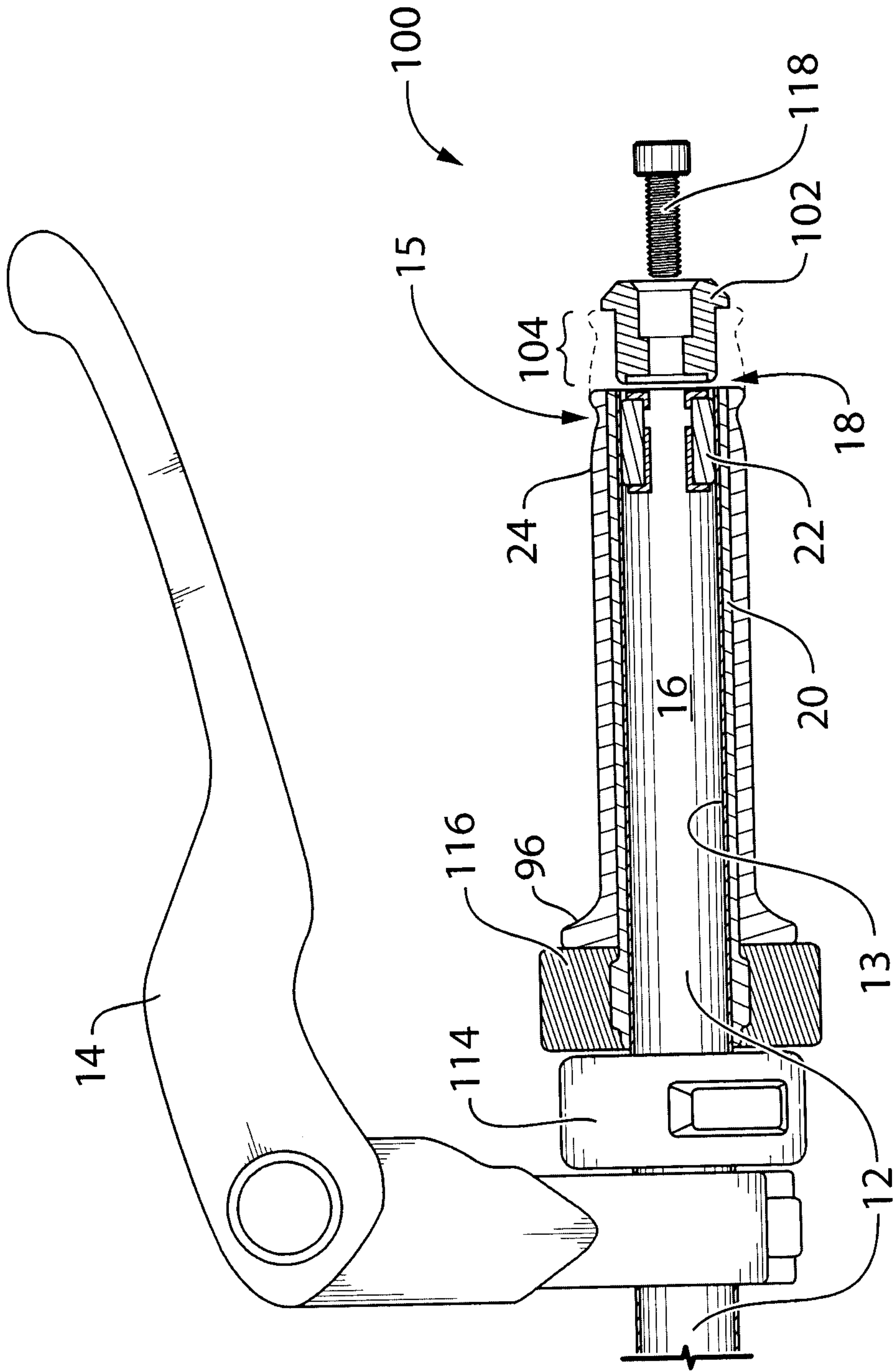


FIG. 1

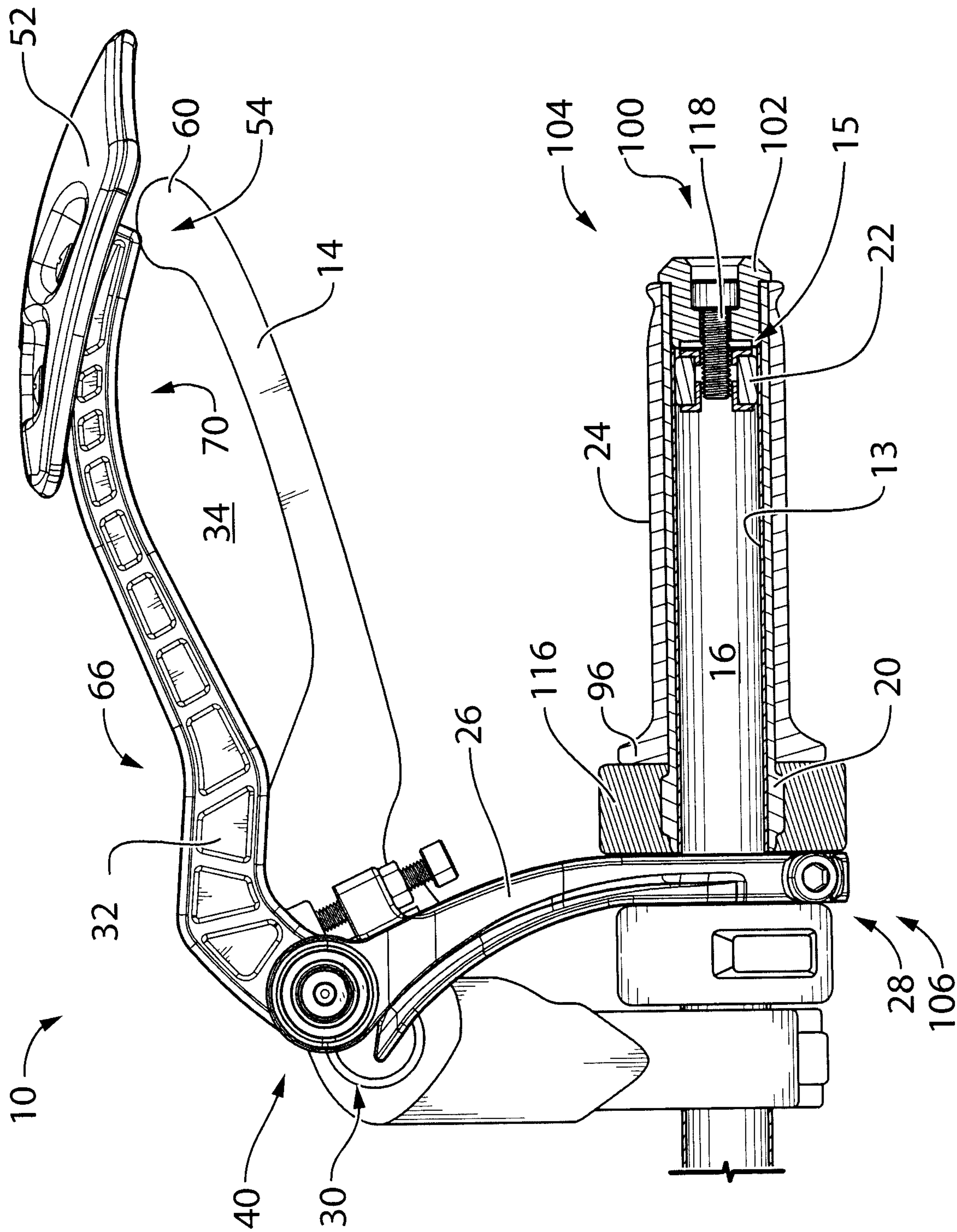


FIG. 2

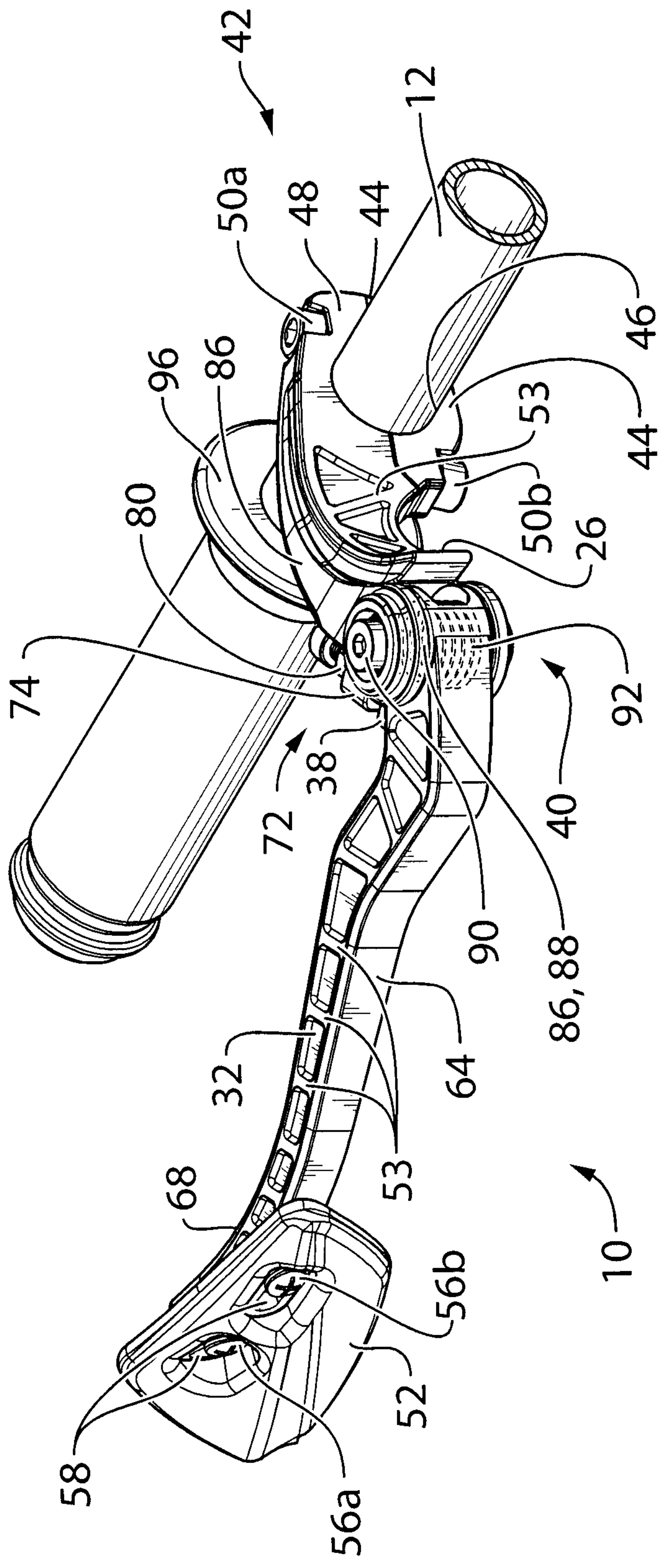


FIG. 3

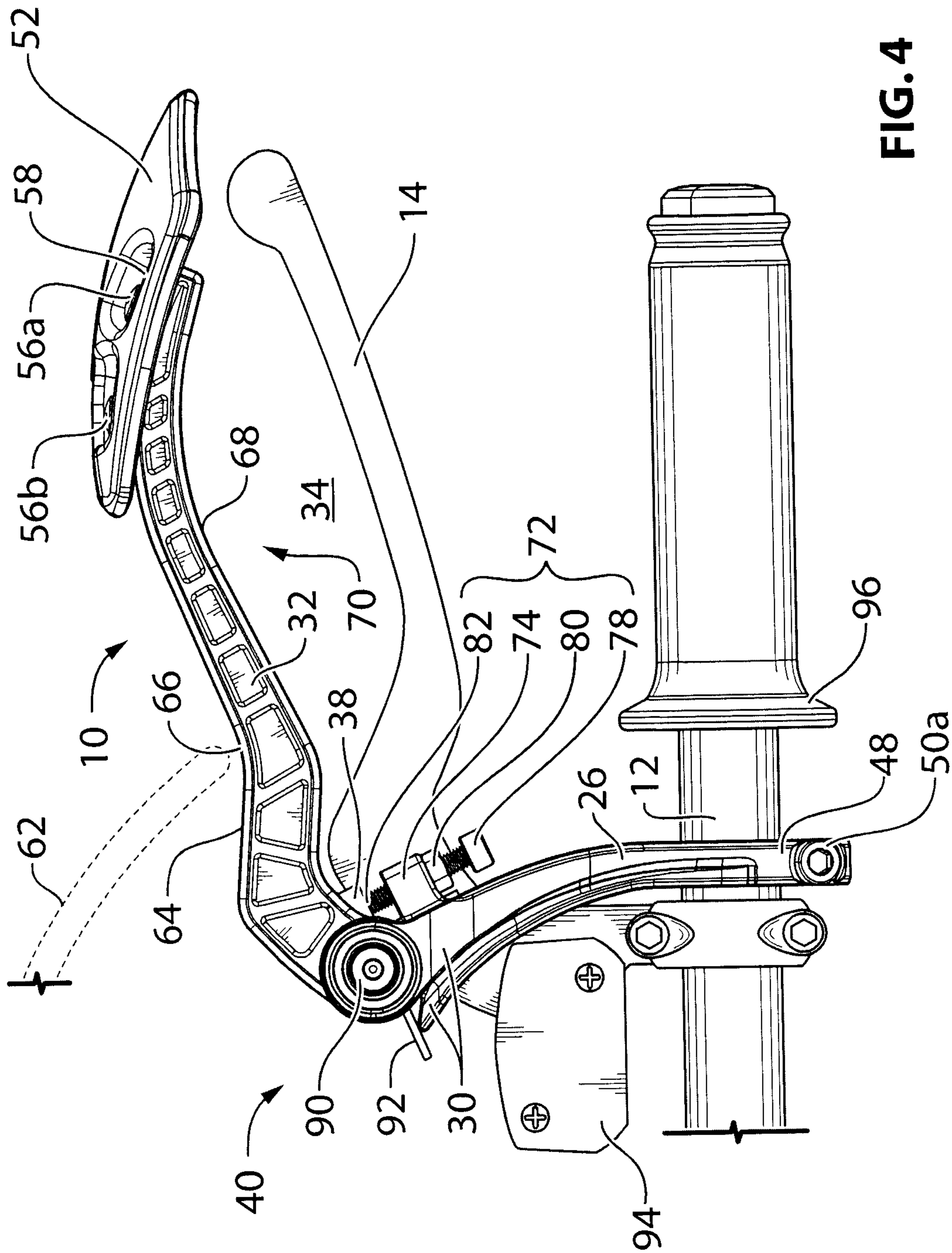


FIG. 4

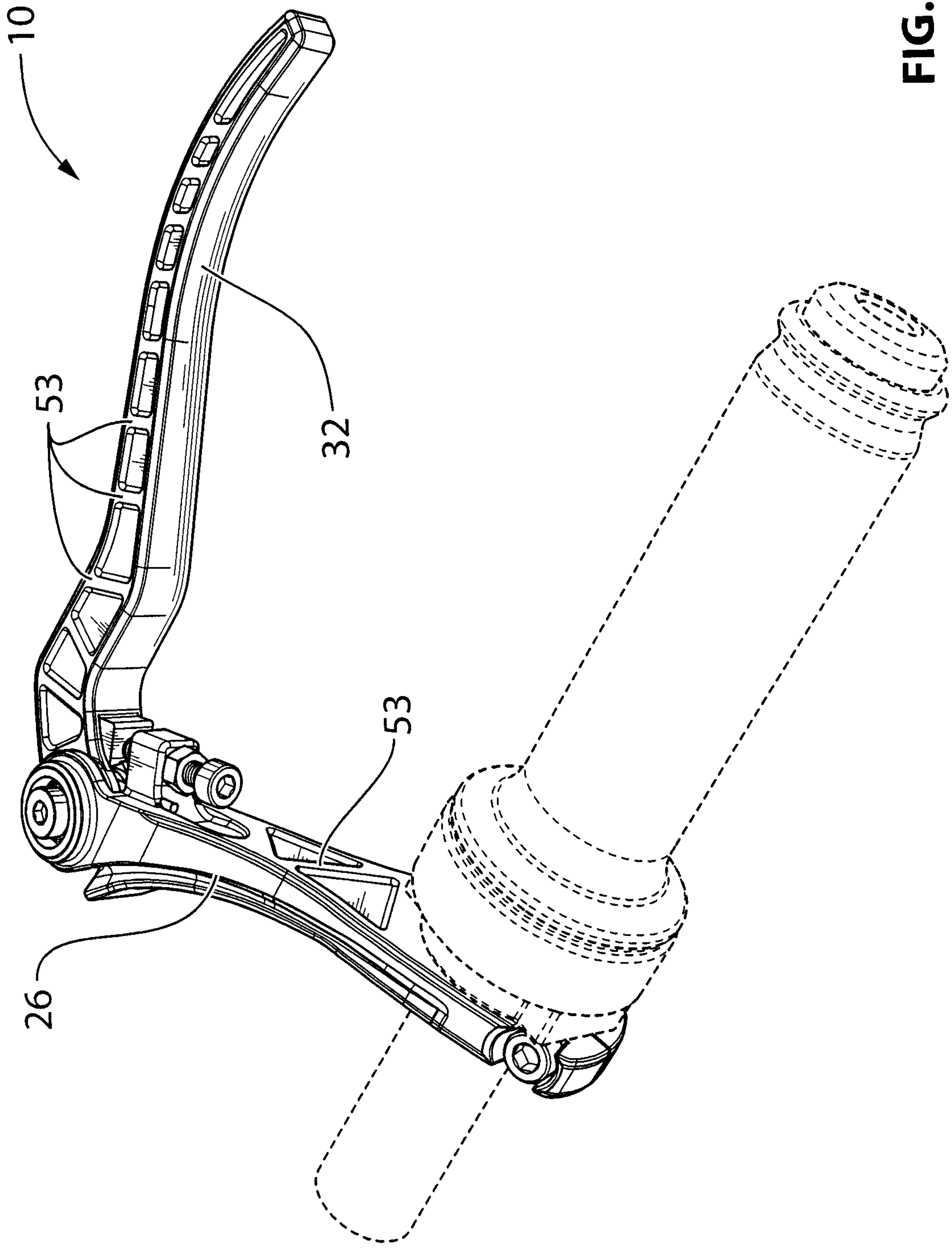


FIG. 5

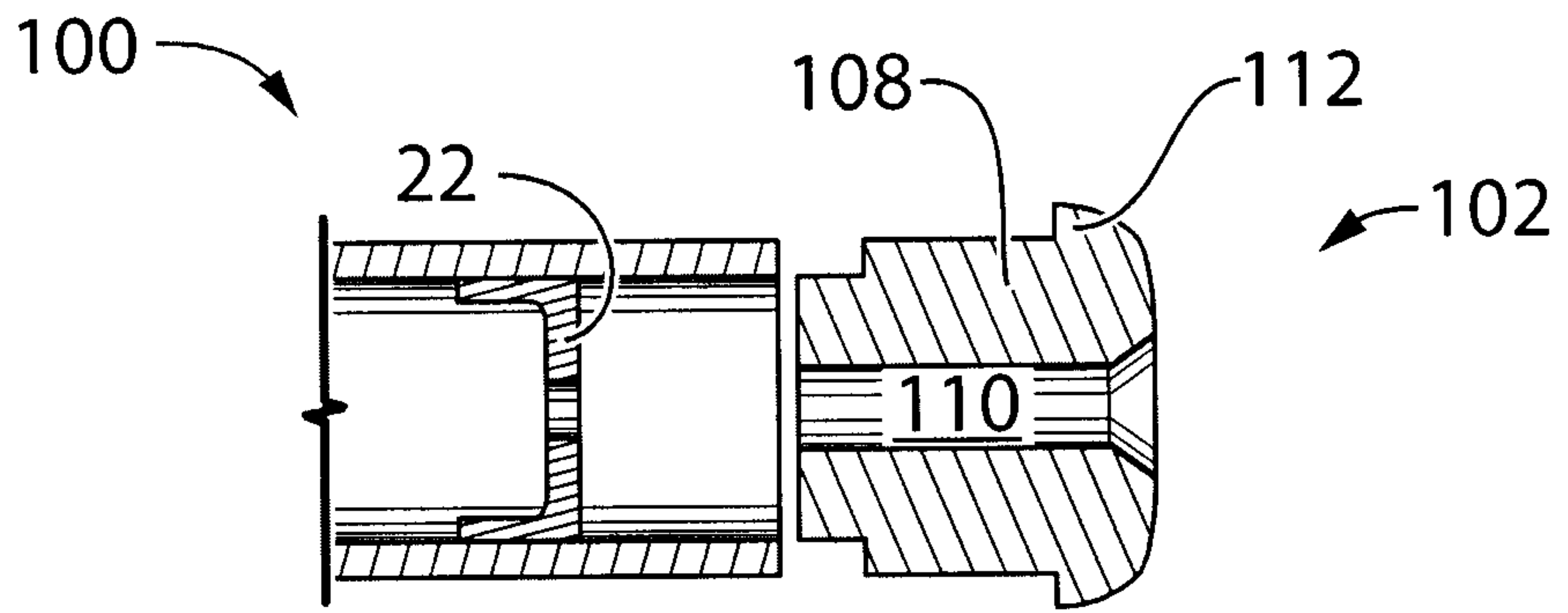


FIG. 6a

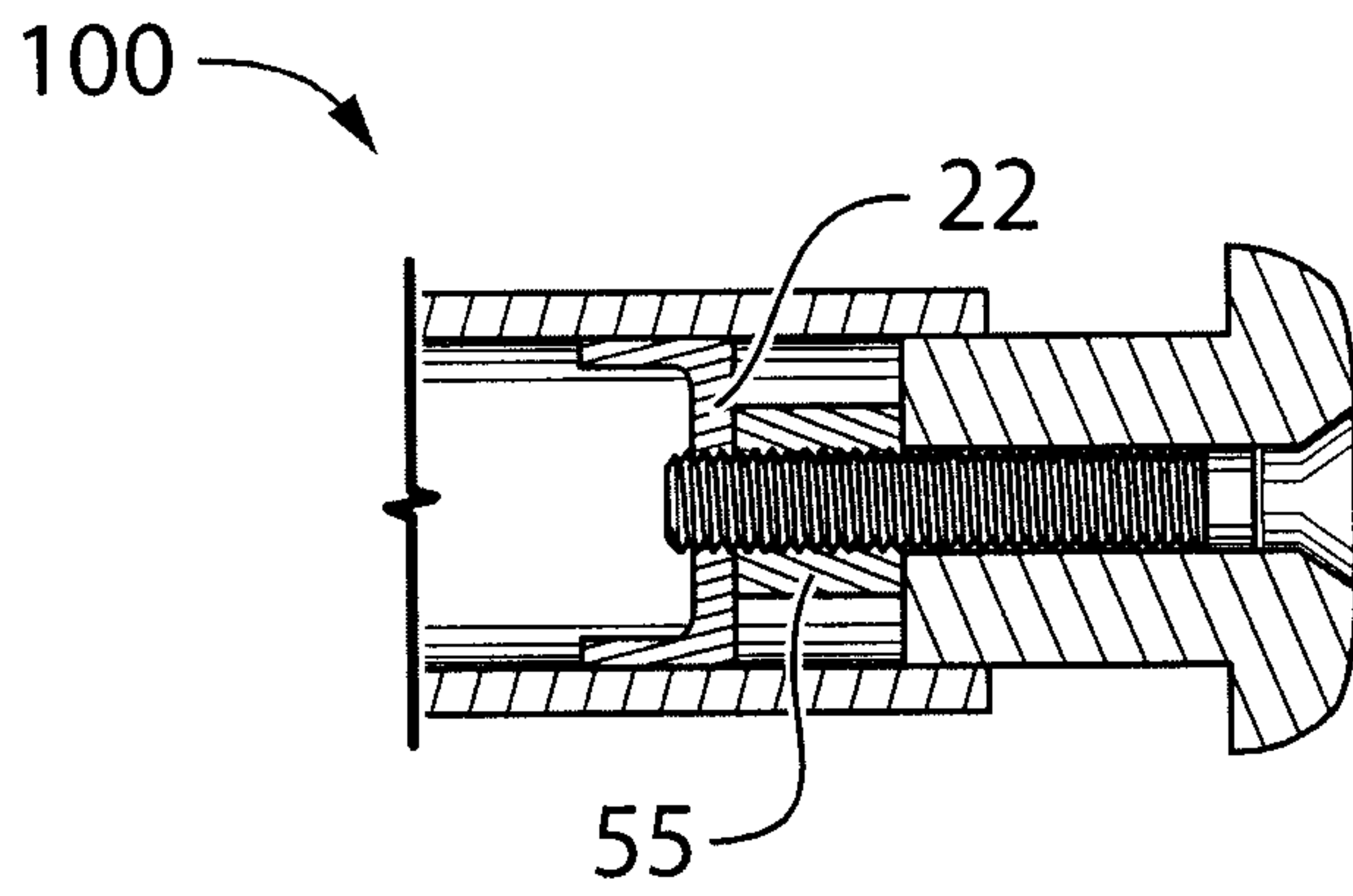


FIG. 6b

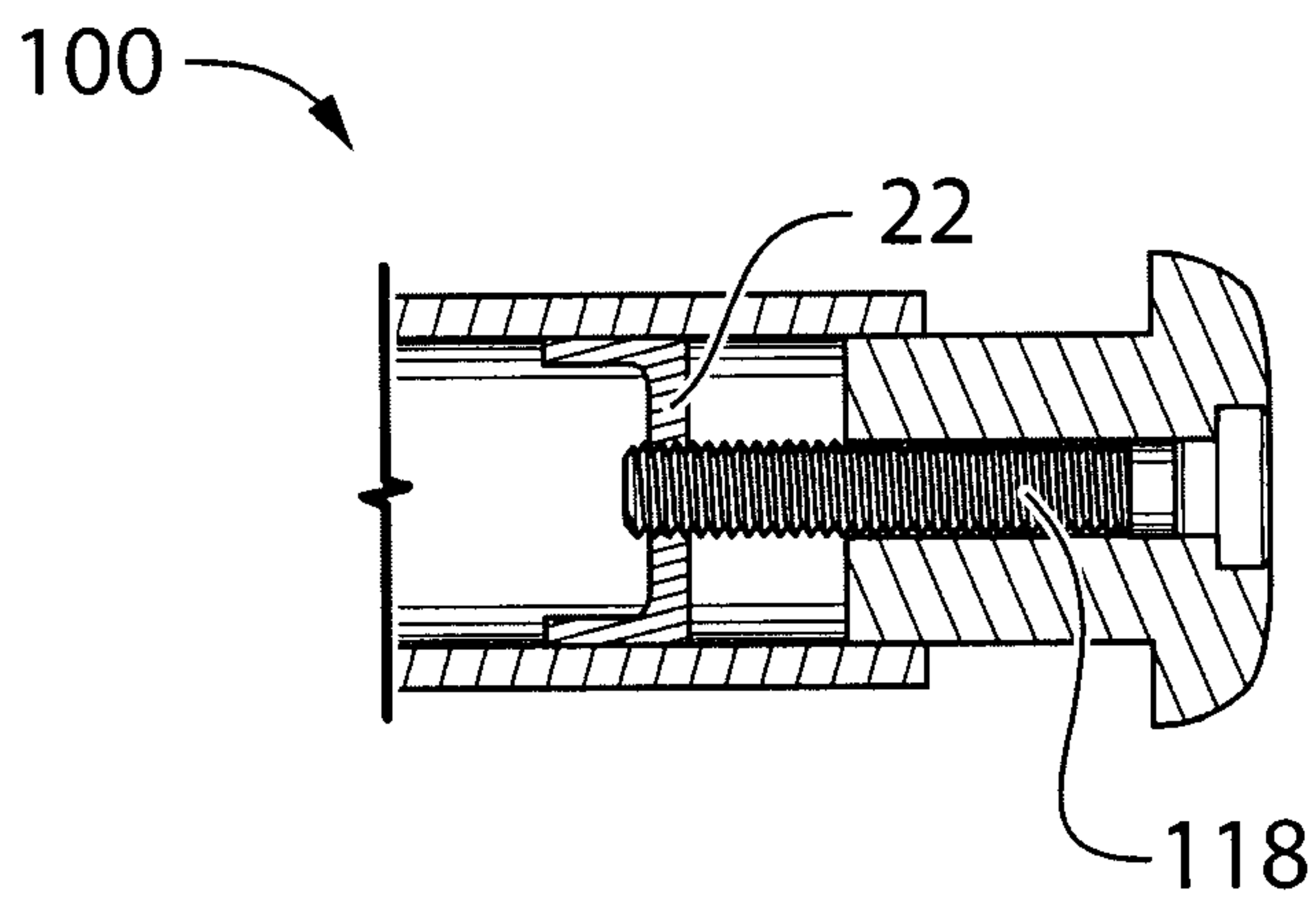


FIG. 6c

