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(54) **PRESSURE ROLLER DEVICE FOR A MACHINE THAT IS USED TO CUT WOUND LAMINAR MATERIAL**

DRUCKROLLENVORRICHTUNG FÜR EINE ZUM SCHNEIDEN VON GEWICKELTEM LAMINARMATERIAL VERWENDETE MASCHINE

DISPOSITIF DE ROULEAU DE PRESSE DESTINÉ À UNE MACHINE DE COUPE DE MATÉRIAU LAMINAIRE ENROULÉ

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Description

Field of the Art

[0001] The present invention relates to a pressure roller device applied to a wound web material cutting machine, useful in the graphic arts industry to compensate for fluctuations in the thickness of the web material that is being cut and wound and to prevent the lateral sliding of web materials with a low coefficient of friction.

State of the Prior Art

[0002] Cutting-winding machines are known which have means for making one or more longitudinal cuts in a flexible web material unwound from a single reel, and means for re-coiling the two or more resulting strips into corresponding coaxially arranged narrower take-up reels. In these types of machines, it is known to arrange a single pressure roller associated to a thruster to apply pressure on the several take-up reels as the cut material is wound. However, this single roller is not able to adapt to small differences in diameter of the take-up reels due to variations in the thickness of the cut material, so that it cannot assure that the pressure actually applied to each reel is the same.

[0003] It is also known to arrange several independent pressure roller and thrust device assemblies to be able to independently apply substantially equal pressures to each of the several take-up reels. In this case, each assembly comprises a pivoting arm supporting the shaft of the pressure roller and a pneumatic cylinder arranged between a base plate and the pivoting arm for thrusting the roller towards the corresponding take-up reel. However, the mechanical assembly of the different pressure rollers requires leaving separation gaps between them which limit the minimum width of the take-up reels and make it difficult to adapt the system of pressure rollers to reels having different widths. In addition, this arrangement results in a relatively complex construction, with high manufacturing and maintenance costs.

[0004] Patent application US-A-2004075011 discloses a pressure roller device having the features set forth in the preamble of claim 1.

Disclosure of the Invention

[0005] The present invention contributes to overcoming the aforementioned and other drawbacks by providing a pressure roller device for a wound web material cutting machine, comprising in combination a support bar on which a pressure roller is rotatably mounted, said pressure roller being formed by a plurality of adjacent pressure segments, each of said pressure segments having an outer cylindrical surface opposite an outer cylindrical surface of at least one reel; guide means adapted for guiding movements of the pressure segments in a radial direction in relation to said support bar; and thrust means

adapted for individually and independently thrusting each pressure segment guided in said guide means against said at least one reel, whereby the outer cylindrical surfaces of the pressure segments can be positioned off-centre in relation to a central line of the support bar, with different eccentricities individually determined by the contact of the outer cylindrical surface of each pressure segment with the outer cylindrical surface of the reel. According to invention, the mentioned thrust means comprise an expandable element common for all the pressure segments, said expandable element being driven by a pressurized fluid for individually thrusting the pressure segments with a common pressure.

[0006] With this construction, the device of the present invention ensures that the same pressure will be applied in each reel, which provides a uniform hardness or compacting degree in all the reels.

[0007] The pressure roller device of the present invention has the advantages in terms of performances of a known type construction having separate individual rollers, and however, as a result of being mounted on a common support bar, it can be supported on a support structure that is as simple as the one used for a prior art single pressure roller.

[0008] Furthermore, the device of the present invention allows increasing the production time of the cutting machine, since it does not have to change the rollers to go, for example, from a single pressure roller to individual pressure rollers, nor does it have to make axial movements of the different pressure rollers in order to adjust the cutting machine to different reel widths.

[0009] The pressure roller device of the present invention, including individual pressure sections, allows a smaller minimum reel width than the previously known devices.

Brief Description of the Drawings

[0010] The previous and other advantages and features will be more fully understood from the following detailed description of an embodiment with reference to the attached drawings, in which:

Figure 1 is an isometric view of one end of a pressure roller device for a wound web material cutting machine according to an embodiment of the present invention;

Figure 2 is a cross-section view of the roller device of Figure 1 with a contracted expandable element and a pressure segment in a retracted position in relation to a support bar;

Figure 3 is a cross-section view similar to Figure 2, but with the expandable element being expanded and the pressure segment in an extended position in relation to the support bar; and

Figure 4 is a longitudinal section view of the pressure roller device of Figure 1.

Detailed Description of an Exemplary Embodiment

[0011] Referring first with to Figure 1, the pressure roller device for a wound web material cutting machine comprises, according to one exemplary embodiment, a support bar 10 on which a pressure roller 20 is rotatably mounted, said pressure roller being formed by a plurality of adjacent pressure segments 25 very close to one another. Each of said pressure segments 25 has an outer cylindrical surface 21 opposite an outer cylindrical surface of at least one reel 30 (indicated by means of dotted lines in Figures 2 and 3). In general, the cutting machine incorporates several take-up reels 30 for taking up and winding respective strips of material cut from a wider strip coming from a single input reel (not shown). The various take-up reels 30 are coaxial in relation to a shaft parallel to a central line 15 of the support bar 10, and each pressure segment 25 can correspond to one of the take-up reels 30, or there can be several pressure segments 25 for each of the several take-up reels 30. The cutting machine has means for moving the support bar 10 towards the take-up reels 30 to put the pressure segments 25 into contact with the same.

[0012] The device of the present invention further comprises guide means adapted for guiding movements of the pressure segments 25 in a radial direction in relation to said support bar 10, and thrust means adapted for individually and independently thrusting each pressure segment 25 guided in said guide means against said at least one reel 30. Therefore, the outer cylindrical surfaces 21 of the pressure segments 25 can be positioned off-centre in relation to a central line 15 of the support bar 10 to compensate for differences in diameter of the several take-up reels 30 caused by possible fluctuations in the thickness of the web material that is being cut and wound. The pressure exerted by the pressure segments 25 on the take-up reels 30 further serves to provide a certain hardness or compacting degree to the reels and to prevent the lateral sliding of web materials with a low coefficient of friction. The degree of eccentricity of each of the pressure segments 25 is individually determined by the contact of the outer cylindrical surface 21 of each pressure segment 25 with an outer cylindrical surface of the reel 30. However, since said thrust means comprise an expandable element 60 driven by a pressurized fluid common for all the pressure segments 25, the pressure segments 25 are individually thrust against the take-up reels 30 with a single pressure common to all of them.

[0013] As better shown in Figures 2 and 3, the support bar 10 is generally cylindrical and has formed two diametrically opposite planar outer faces 11 parallel to one another and parallel to the central line 15 of the support bar 10. These two planar outer faces 11 are in sliding contact with corresponding parallel planar inner faces 41 formed in a cavity 42 of a core 40 on which the pressure segment 25 rotates, such that said core 40 together with the pressure segment 25 can be radially moved in relation to the support bar 10. The planar outer faces 11 of the

support bar together with the mentioned planar inner faces 41 of said core 40 form the guide means referred to above. The mentioned thrust means comprise, in addition to said expandable element 60, at least one thrust member 50 for each pressure segment 25. This thrust member 50 is located between the support bar 10 and the core 40 of the corresponding pressure segment 25, and the expandable element 60 is located along the support bar 10 between the support bar 10 and all the thrust members 50. The mentioned pressurized fluid is preferably pressurized air, although it could be any other gas or even a liquid.

[0014] In the situation shown in Figure 2, the expandable element 60 is substantially empty of fluid and adopts a contracted shape, so that the thrust member 50 is retracted and the pressure segment 25 can adopt an also retracted position in relation to the support bar 10.

[0015] In the situation shown in Figure 3, the expandable element 60 is full of fluid at a certain pressure, so that it is expanded up to a certain extent. The expansion of the expandable element 60 individually thrusts all the thrust members 50 against the respective cores 40 and the latter move radially together with the respective pressure segments 25 to an extended position in relation to the support bar 10, in which the outer cylindrical surfaces of the pressure segments 25 are in contact with the corresponding take-up reels 30. During the operation, the expansion of the expandable element 60 allows the degree of extension of each of the different pressure segments 25 to adjust to the particular diameter of the corresponding take-up reel 30 and, however, the pressure exerted by the expandable element 60 is common and uniform for all the pressure segments 25.

[0016] It must be indicated that although Figures 2 and 3 show the limit retracted and extended positions, respectively, during an actual operation the pressure segments 25 will fluctuate between intermediate retracted and extended positions without reaching, except in exceptional situations, the mentioned limit retracted and extended positions.

[0017] The support bar 10 has formed therealong a housing 12 in the form of a groove with a longitudinal opening located between said two planar outer faces 11 of the support bar 10. Each of the thrust members 50 comprises a guide portion 51 inserted in said housing 12 of the support bar 10 such that it can slide out of and into such housing in a direction parallel to the two planar outer faces 11 of the support bar 10. The thrust member 50 also comprises a projecting portion 52 having an end adapted for applying pressure on an inner surface of the mentioned cavity 42 of the core 40 of the pressure segment 25 when the thrust member 50 is moved out of the housing 12. The expandable element 60 has the form of an expandable sleeve 60 arranged along the housing 12 from one end of the support bar 10 to the other, and placed between a bottom surface of the housing 12 and an end surface of each of said guide portions 51 of the thrust members 50. The expandable sleeve 60 can be

connected to a pressurized fluid source through valve means associated to the support bar 10, and said valve means can be closed to retain an amount of fluid at a predetermined pressure inside the expandable sleeve 60.

[0018] At opposite edges of the longitudinal opening of the housing 12 of the support bar 10 there are formed flanges aimed towards one another which interfere with protuberances 53 formed next to an inner end of the guide portion 51 of each thrust member 50. As a result, the thrust members 50 are retained in the housing 12 with limited sliding possibility due to the interference of the flanges of the housing 12 with the protuberances 53 of the thrust members 50. The support bar 10 has ends projecting from the pressure roller 20, and, in at least one of these projecting ends of the support bar 10 (shown in Figure 1), the longitudinal opening of the housing 12 has a widening 13 with a sufficient size to allow the passage of the protuberances 53 of the guide portions 51 of the thrust members 50. Thus, for the assembly of the pressure roller device of the present invention, the thrust members 50 can be introduced one after another through the mentioned widening 13 and then slid along the housing 12 until their operational position. A stop 14 is fixed inside a portion of the housing 12 located at the projecting end of the support bar 10 and facing said widening 13. The purpose of said stop 14 is to retain the thrust members 50 inside the housing 12 of the support bar 10 once they have been introduced, preventing a movement thereof in the direction of the central line 15.

[0019] With reference now to Figure 4, each pressure segment 25 comprises a cover 21a of a suitable material to provide the outer cylindrical surface 21, fixed on a structural bush 29, which is rotatably mounted on its corresponding core 40 by means of a pair of bearings 26, which are of a type adapted to furthermore retain the pressure segment 25 on its corresponding core 40 against a movement in an axial direction. Between every two adjacent pressure segments 25 there are arranged one or more separators 27 in the form of blocks of a material with a low coefficient of friction fixed to the core 40 of one of the two adjacent pressure segments 25 by means of screws 42. Each of these separators 27 is in sliding contact with a side surface of the core 40 of the other one of the two adjacent pressure segments 25 to allow movements of the pressure segments 25 in the radial direction along the guide means described above while at the same time they assure a minimal separation allowance between the adjacent pressure segments 25. Next to each of the two pressure segments 25 located at the ends of the pressure roller 20 (only one of which is shown in Figure 4) there are arranged one or more stops 28 fixed to one of the planar outer faces 11 of the support bar 10 by means of screws 16. These stops 28 are in sliding contact with a side surface of the core 40 of the corresponding end pressure segment 25 and retain the assembly of pressure segments 25 forming the pressure roller 20 against movements in the axial direction

while at the same time they allow movements of the end pressure segments 25 in the radial direction.

[0020] A person skilled in the art will be able to introduce variations and modifications in the embodiment shown and described without departing from the scope of the present invention as it is defined in the attached claims.

10 Claims

1. A pressure roller device for a wound web material cutting machine comprising in combination:

a support bar (10) on which a pressure roller (20) is rotatably mounted, said pressure roller being formed by a plurality of adjacent pressure segments (25), each of said pressure segments (25) having an outer cylindrical surface (21) opposite an outer cylindrical surface of at least one reel (30),
guide means adapted for guiding movements of the pressure segments (25) in a radial direction in relation to said support bar (10), wherein said guide means comprise two parallel planar outer faces (11) formed in the support bar (10) and in sliding contact with corresponding parallel planar inner faces (41) formed in a cavity (42) of a core (40) on which the pressure segment (25) rotates such that said core (40) together with the pressure segment (25) can be moved radially in relation to the support bar (10); and
thrust means adapted for individually and independently thrusting each pressure segment (25) guided in said guide means against said at least one reel (30), whereby said outer cylindrical surfaces (21) of the pressure segments (25) can be positioned off-centre in relation to a central line (15) of the support bar (10) with different eccentricities individually determined by the contact of the outer cylindrical surface (21) of each pressure segment (25) with an outer cylindrical surface of the reel (30), wherein said thrust means comprise an expandable element (60) driven by pressurized fluid for individually thrusting the pressure segments (25) with a common pressure, and wherein said thrust means further comprise for each pressure segment (25) at least one thrust member (50) located between the support bar (10) and the core (40) of the pressure segment (25), said expandable element (60) being located along the support bar (10) between the support bar (10) and said thrust members (50) for individually thrusting the thrust members (50) against the corresponding cores (40) with a common pressure, and therefore radially moving the corresponding pressure segments (25) in relation to the support bar (10),

and wherein said expandable element (60) is in the shape of an expandable sleeve (60) arranged in said housing (12) along the support bar (10) between a bottom surface of the housing (12) and an end surface of each of said guide portions (51) of the thrust members (50), said expandable sleeve (60) being able to be connected to a pressurized fluid source through valve means associated to the support bar (10),

wherein the support bar (10) has a housing (12) formed therealong having a longitudinal opening located between said two planar outer faces (11), and each of the thrust members (50) comprises a guide portion (51) inserted in said housing (12) of the support bar (10) such that it can slide outwardly and inwardly thereof in a direction parallel to the two planar outer faces (11) of the support bar (10), and a projecting portion (52) adapted for applying pressure against an inner surface of said cavity (42) of the core (40) of the pressure segment (25) when said thrust member (50) is moved outwardly from the housing (12);

characterized in that

the thrust member (50) has protuberances (53) formed next to an inner end of the guide portion (51), and said longitudinal opening of the housing (12) of the support bar (10) has flanges interfering with said protuberances (53), so that the thrust member (50) is retained in the housing (12) with limited sliding possibility, and in at least one end of the support bar (10) projecting from the pressure roller (20), the longitudinal opening of the housing (12) has a widening (13) with a sufficient size to allow the passage of the guide portions (51) of the thrust members (50), in a direction perpendicular to a central line (15) of the support bar (10).

2. The device according to claim 1, wherein inside a portion of the housing (12) opposite said widening (13) a stop (14) is fixed for retaining the thrust members (50) inside the housing (12) of the support bar (10) against a movement in the direction of the central line (15).
3. The device according to claim 2, wherein each pressure segment (25) is rotatably mounted on its corresponding core (40) by means of a pair of bearings (26), which are further adapted for retaining the pressure segment (25) on its corresponding core (40) against a movement in an axial direction.
4. The device according to claim 3, wherein between each two adjacent pressure segments (25) at least one separator (27) is arranged, said at least one separator (27) being fixed to the core (40) of one of the

two adjacent pressure segments (25) and in sliding contact with a side surface of the core (40) of the other one of the two adjacent pressure segments (25).

5. The device according to claim 4, wherein next to each of the two pressure segments (25) located at the ends of the pressure roller (20) at least one stop (28) is arranged, said at least one stop (28) being fixed to one of the planar outer faces (11) of the support bar (10) and in sliding contact with a side surface of the core (40) of the corresponding pressure segment (25).

Patentansprüche

1. Druckrollenvorrichtung für eine Maschine zum Schneiden von gewickeltem bahnförmigen Material umfassend, in Kombination:

eine Stützzange (10), auf welcher eine Druckrolle (20) drehbar gelagert ist, wobei die genannte Druckrolle aus einer Vielzahl von benachbarten Drucksegmenten (25) gebildet ist, wobei jedes der genannten Drucksegmente (25) eine äußere zylindrische Oberfläche (21) aufweist, welche einer äußeren zylindrischen Oberfläche aus mindestens einer Spule (30) entgegengesetzt ist, Führungsmittel, welche dazu angepasst sind, für Bewegungen der Drucksegmente (25) in radialer Richtung in Bezug auf die genannte Stützzange (10) zu führen, wobei die genannten Führungsmittel zwei parallele flache äußere Flächen (11) umfassen, welche in der Stützzange (10) gebildet sind und in Gleitkontakt mit entsprechenden parallelen flachen inneren Flächen (41) stehen, welche in einer Ausbuchtung (42) eines Kerns (40) gebildet sind, in welcher sich das Drucksegment (25) dreht, so dass der genannte Kern (40) zusammen mit dem Drucksegment (25) in Bezug auf die Stützzange (10) radial bewegt werden kann; und Schubmittel, welche dazu angepasst sind, jedes in die genannten Führungsmittel geführte Drucksegment (25) gegen die genannte mindestens eine Spule (30) einzeln und unabhängig zu schieben, wodurch die genannten äußeren zylindrischen Oberflächen (21) der Drucksegmente (25) exzentrisch in Bezug auf eine Mittellinie (15) der Stützzange (10) platziert werden können, mit unterschiedlichen Exzentrizitäten, welche durch den Kontakt der äußeren zylindrischen Oberfläche (21) jedes Drucksegments (25) mit einer äußeren zylindrischen Oberfläche der Spule (30) einzeln bestimmt werden, wobei die genannten Schubmittel ein expandierbares Element (60) umfassen, welches durch ein unter

Druck stehendes Fluid betätigt wird, um die Drucksegmente (25) mit einem gemeinsamen Druck einzeln zu schieben, und wobei die genannten Schubmittel zusätzlich für jedes Drucksegment (25) mindestens ein Schubelement (50) umfassen, welches sich zwischen der Stützstange (10) und dem Kern (40) des Drucksegments (25) befindet, wobei sich das genannte expandierbare Element (60) entlang der Stützstange (10) zwischen der Stützstange (10) und den genannten Schubelementen (50) befindet, um die Schubelemente (50) gegen die entsprechenden Kerne (40) mit einem gemeinsamen Druck einzeln zu schieben, und daher die entsprechenden Drucksegmente (25) in Bezug auf die Stützstange (10) radial zu bewegen, und wobei das genannte expandierbare Element (60) die Form eines expandierbaren Schlauchs (60) aufweist, welcher im genannten Gehäuse (12) entlang der Stützstange (10) zwischen einer unteren Oberfläche des Gehäuses (12) und einer Endoberfläche jedes der genannten Führungsteile (51) der Schubelemente (50) angeordnet ist, wobei der genannte expandierbare Schlauch (60) in der Lage ist mit einem unter Druck stehenden Fluidquelle über mit der Stützstange (10) assoziierte Ventilmittel verbunden zu werden, wobei die Stützstange (10) ein Gehäuse (12) aufweist, welches entlang derselben gebildet ist, aufweisend eine längliche Öffnung, welche sich zwischen den genannten zwei flachen äußeren Flächen (11) befindet, und jedes der Schubelemente (50) einen Führungsteil (51) umfasst, welcher in das genannte Gehäuse (12) der Stützstange (10) eingeführt ist, so dass er nach außen und nach innen desselben gleiten kann, in einer zu den zwei flachen äußeren Flächen (11) der Stützstange (10) parallelen Richtung, und einen vorspringenden Teil (52) umfasst, welcher dazu angepasst ist, Druck gegen eine innere Oberfläche der genannten Aushöhlung (42) des Kerns (40) des Drucksegments (25) auszuüben, wenn das genannte Schubelement (50) vom Gehäuse (12) aus nach außen bewegt wird;

dadurch gekennzeichnet, dass

das Schubelement (50) Vorsprünge (53) aufweist, welche neben einem inneren Ende des Führungsteils (51) gebildet sind, und die genannte längliche Öffnung des Gehäuses (12) der Stützstange (10) Flansche aufweist, welche mit den genannten Vorsprüngen (53) störend einwirken, so dass das Schubelement (50) im Gehäuse (12) mit einer begrenzten Gleitmöglichkeit gehalten wird, und in mindestens einem Ende der Stützstange (10), welches aus der Druckrolle (20) vorspringt, die längliche Öffnung

des Gehäuses (12) eine Erweiterung (13) mit einer genügenden Größe aufweist, um den Durchgang der Führungsteile (51) der Schubelemente (50) in einer zur Mittellinie (15) der Stützstange (10) senkrechten Richtung zu erlauben.

2. Vorrichtung nach Anspruch 1, wobei innerhalb eines Teils des Gehäuses (12), gegenüber der genannten Erweiterung (13), ein Anschlag (14) befestigt ist, um die Schubelemente (50) innerhalb des Gehäuses (12) der Stützstange (10) gegen eine Bewegung in Richtung der Mittellinie (15) zu halten.
3. Vorrichtung nach Anspruch 2, wobei jedes Drucksegment (25) auf dessen entsprechenden Kern (40) mittels eines Paares von Lagerungen (26) drehbar gelagert ist, welche zusätzlich dazu angepasst sind, das Drucksegment (25) auf dessen entsprechenden Kern (40) gegen eine Bewegung in axialer Richtung zu halten.
4. Vorrichtung nach Anspruch 3, wobei zwischen jeden zwei benachbarten Drucksegmenten (25) mindestens ein Trennelement (27) angeordnet ist, wobei das genannte mindestens eine Trennelement (27) an dem Kern (40) eines der zwei benachbarten Drucksegmente (25) befestigt ist und in Gleitkontakt mit einer seitlichen Oberfläche des Kerns (40) des anderen der zwei benachbarten Drucksegmente (25) steht.
5. Vorrichtung nach Anspruch 4, wobei neben jedem der zwei Drucksegmente (25), welche sich an den Enden der Druckrolle (20) befinden, mindestens ein Anschlag (28) angeordnet ist, wobei der genannte mindestens eine Anschlag (28) an einer der flachen äußeren Flächen (11) der Stützstange (10) befestigt ist und in Gleitkontakt mit einer seitlichen Oberfläche des Kerns (40) des entsprechenden Drucksegments (25) steht.

Revendications

1. Un dispositif de rouleau presseur pour une machine de coupe de matériau en bande enroulé comportant en combinaison :

une barre de support (10) sur laquelle un rouleau presseur (20) est monté en rotation, ce rouleau presseur étant formé par une pluralité de segments de pression adjacents (25), chacun de ces segments de pression (25) ayant une surface cylindrique extérieure (21) en face d'une surface cylindrique extérieure d'au moins une bobine (30),
des moyens de guidage adaptés pour guider les

mouvements des segments de pression (25) dans un sens radial par rapport à cette barre de support (10), où ces moyens de guidage comportent deux faces extérieures planes parallèles (11) formées sur la barre de support (10) et en contact coulissant avec les faces intérieures planes parallèles correspondantes (41) formées dans une cavité (42) d'un noyau (40) sur lequel le segment de pression (25) tourne de sorte que ce noyau (40) peut se déplacer radialement par rapport à la barre de support (10) ensemble avec le segment de pression (25) ; et des moyens de poussée adaptés pour pousser individuellement et indépendamment chaque segment de pression (25) guidé dans ces moyens de guidage contre cette au moins une bobine (30), de façon que ces surfaces cylindriques extérieures (21) des segments de pression (25) peuvent être positionnées décalées par rapport à une ligne centrale (15) de la barre de support (10) avec des excentricités différentes individuellement déterminées par le contact de la surface cylindrique extérieure (21) de chaque segment de pression (25) avec une surface cylindrique extérieure de la bobine (30), où ces moyens de poussée comportent un élément extensible (60) entraîné par un fluide sous pression pour pousser individuellement les segments de pression (25) avec une pression commune et où ces moyens de poussée de plus comportent pour chaque segment de pression (25) au moins un élément de poussée (50) situé entre la barre de support (10) et le noyau (40) du segment de pression (25), cet élément extensible (60) étant situé le long de la barre de support (10) entre la barre de support (10) et ces éléments de poussée (50) pour pousser individuellement les éléments de poussée (50) contre les noyaux correspondants (40) avec une pression commune, et donc déplacer radialement les segments de pression correspondants (25) par rapport à la barre de support (10), et où cet élément extensible (60) a la forme d'un manchon extensible (60) aménagé dans ce carter (12) le long de la barre de support (10) entre une surface de base du carter (12) et une surface d'extrémité de chacune de ces portions de guidage (51) des éléments de poussée (50), ce manchon extensible (60) pouvant être connecté à une source de fluide sous pression à travers des moyens de soupape associés à la barre de support (10),

où la barre de support (10) a un carter (12) formé tout le long ayant une ouverture longitudinale située entre ces deux faces extérieures planes (11) et chacun des éléments de poussée (50) comprend une portion de guidage (51) engagée dans ce carter (12)

de la barre de support (10) de sorte qu'elle puisse glisser vers l'extérieur et vers l'intérieur de celui-ci en sens parallèle aux deux faces extérieures planes (11) de la barre de support (10), et une portion en saillie (52) adaptée pour appliquer la pression contre une surface intérieure de cette cavité (42) du noyau (40) du segment de pression (25) où cet élément de poussée (50) est déplacé vers l'extérieur du carter (12);

caractérisé en ce que

l'élément de poussée (50) a des protubérances (53) formées à la suite d'une extrémité intérieure de la portion de guidage (51) et cette ouverture longitudinale du carter (12) de la barre de support (10) a des brides qui interfèrent avec ces protubérances (53) de sorte que l'élément de poussée (50) est retenu dans le carter (12) avec des possibilités de coulissage limitées, et dans au moins une extrémité de la barre de support (10) se projetant du rouleau presseur (20), l'ouverture longitudinale du carter (12) a un élargissement (13) ayant une taille suffisante pour permettre le passage des portions de guidage (51) des éléments de poussée (50), dans un sens perpendiculaire à la ligne centrale (15) de la barre de support (10).

2. Le dispositif conformément à la revendication 1, où à l'intérieur d'une portion du carter (12) faisant face à cet élargissement (13) une butée (14) est fixée pour retenir les éléments de poussée (50) à l'intérieur du carter (12) de la barre de support (10) en contrecarrant un mouvement dans le sens de la ligne centrale (15).
3. Le dispositif conformément à la revendication 2, où chaque segment de pression (25) est monté en rotation sur son noyau correspondant (40) au moyen d'une paire de paliers (26), qui sont en plus adaptés pour retenir l'élément de pression (25) sur son noyau correspondant (40) en contrecarrant un mouvement en un sens axial.
4. Le dispositif conformément à la revendication 3, où entre chaque deux éléments de pression adjacents (25) au moins un séparateur (27) est aménagé, cet au moins un séparateur (27) étant fixé au noyau (40) d'un des deux segments de pression adjacents (25) et en contact coulissant avec une surface latérale du noyau (40) d'une autre des deux segments de pression adjacents (25).
5. Le dispositif conformément à la revendication 4, où après chacun des deux segments de pression (25) situé aux extrémités du rouleau de pression (20) au moins une butée (28) est aménagée, cette au moins une butée (28) étant fixée à une des faces extérieu-

res planes (11) de la barre de support (10) et en contact coulissant avec une surface latérale du noyau (40) de l'élément de pression correspondant (25).

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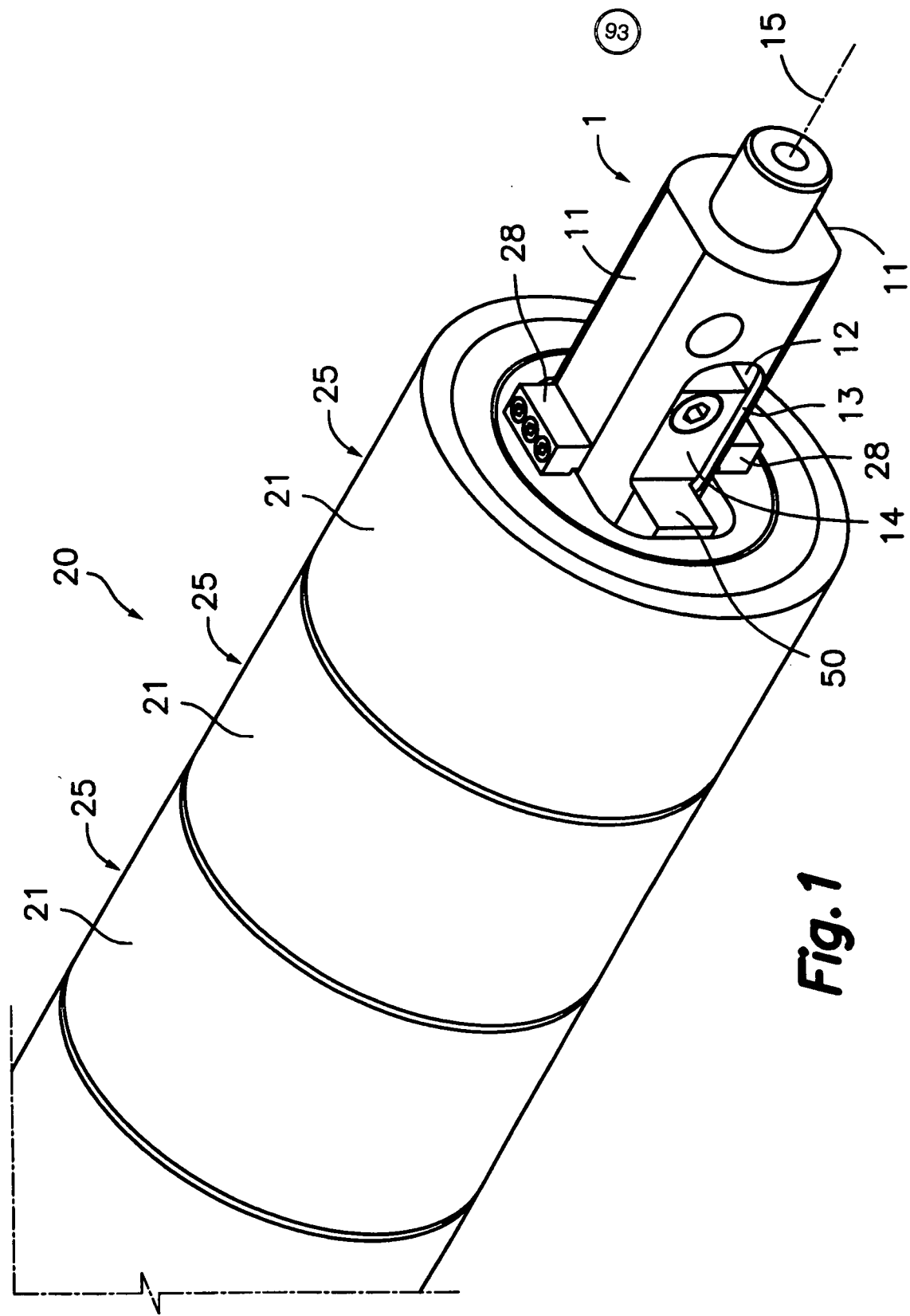


Fig. 1

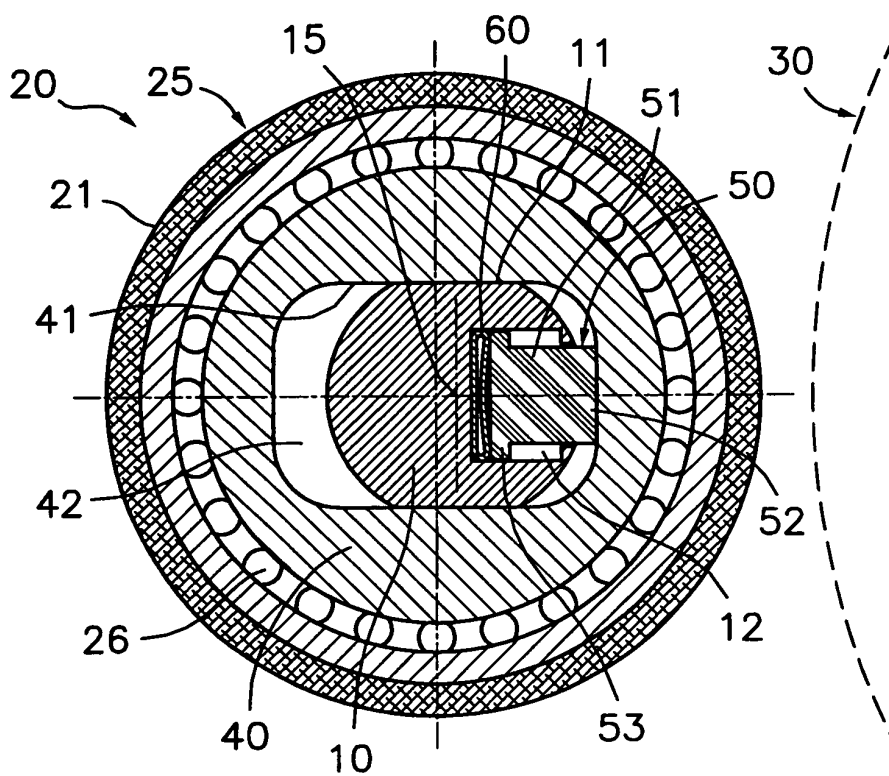


Fig. 2

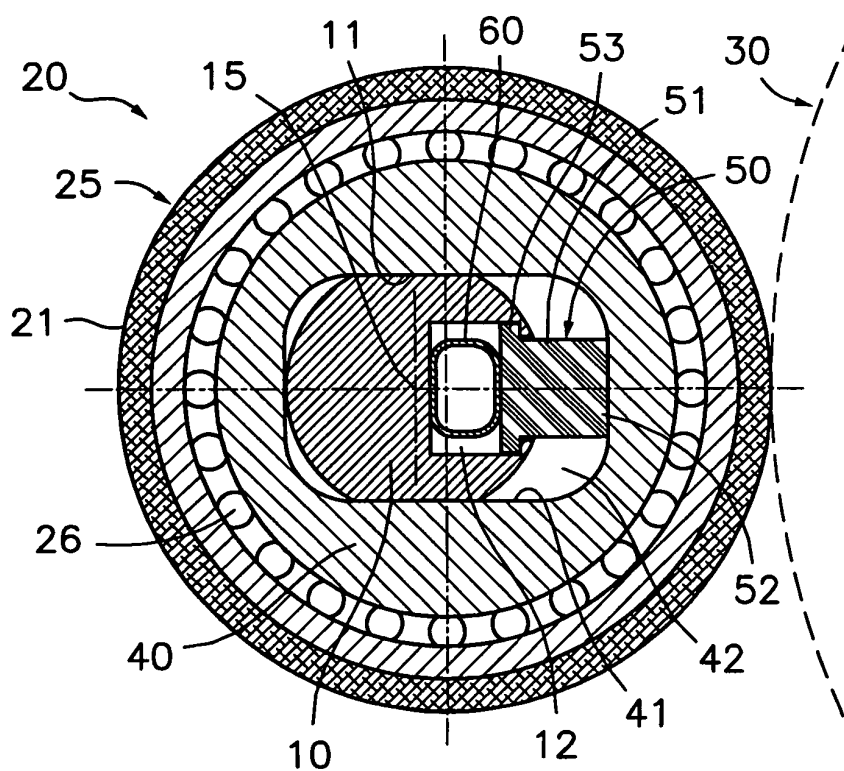


Fig. 3

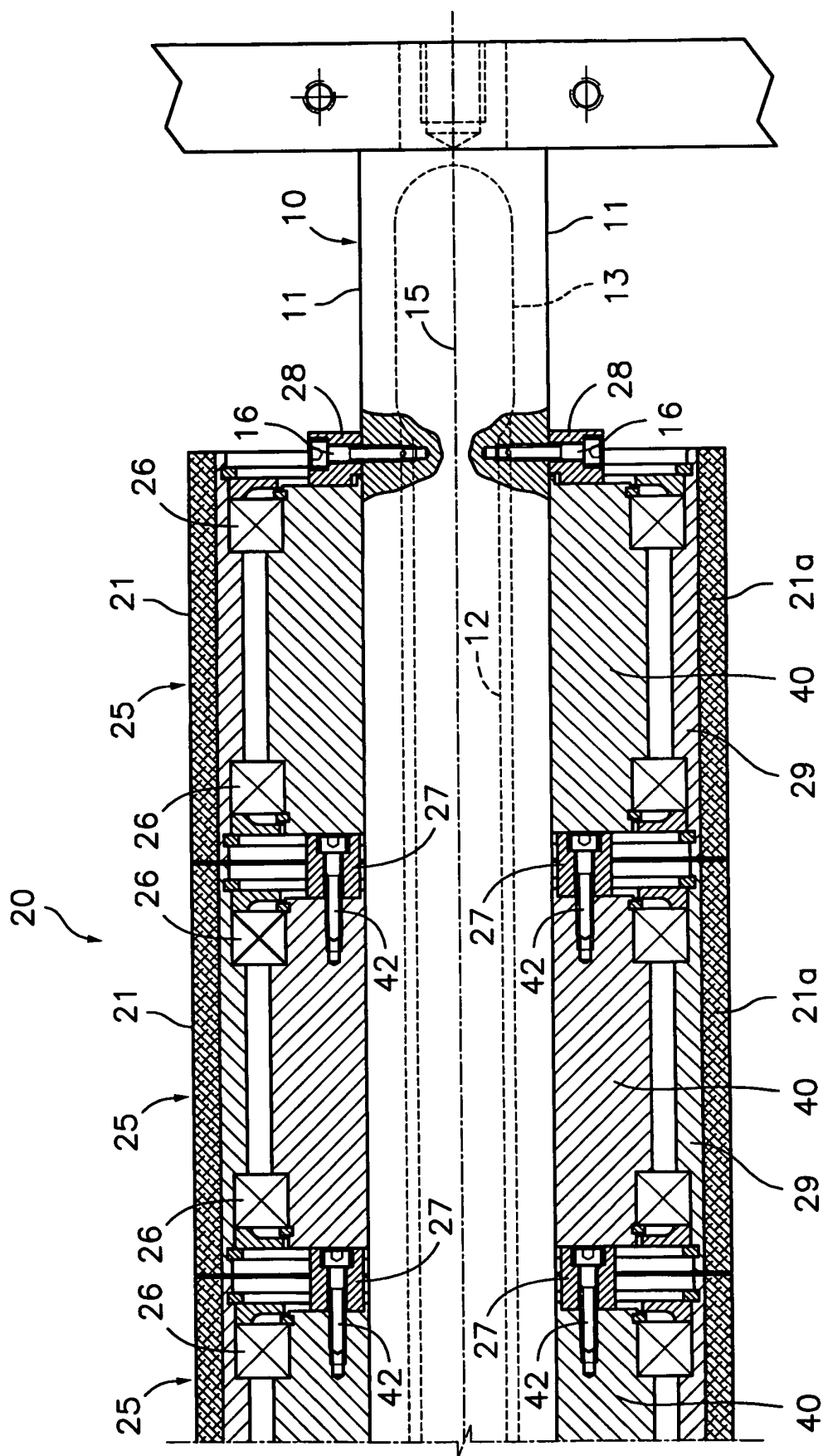


Fig. 4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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