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(54) Pivot bearing for a chop saw

Schwenklager für eine Kappsäge

Palier à pivot pour une scie à tronçonner

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US-A- 2 010 882
US-A- 3 998 121
US-A- 4 934 233

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Description

This invention relates to chop saws of the type comprising a table, a pivot block on the table, a pivot member pivotally mounted with respect to the table about a first axis (which is the bevel axis of the saw) lying in the plane of the table, and a saw assembly mounted on the pivot member and including a motor driven blade adapted to move in its plane (which plane contains said axis) to cut workpieces supported on the table.

The invention is especially useful, although no limited to, saws of the type which have the table mounted in a frame so that the table can flip over between two positions. In a first position the saw is a chop saw with the saw assembly being above the table, but in the second position, the saw assembly is below the table and the blade is adapted to protrude from below through a slot in the table so that workpieces supported on the under surface of the table (now on top) may be presented to the blade for rip sawing and the like.

In particular the present invention is concerned with the bevel pivot arrangements of such saws.

The pivot member is pivotable with respect to the table so that the blade can impinge the workpiece at any desired angle, usually between 45° and 90°, in order to make bevel cuts in the workpiece.

Although not directly relevant to the present invention, the table may also be in two parts. In this event, a rotatable part is received in a fixed part and is rotatable with respect to the fixed part about an axis perpendicular to both the bevel pivot axis and the plane of the table. This enables the saw, whose saw assembly is mounted on the rotatable part of the table, to perform mitre cuts on the workpiece, and even compound cuts. The mitre cut option is usually only employed when the saw operates as a chop saw, it being usual to adjust the position of the workpiece, rather than the blade, when mitre cuts are to be made when the saw is in a bench saw mode.

Returning to the bevel pivot arrangement, the block may be a part of the table or a separate element connected to it. In any event, the pivot member and pivot block abut one another and must slide against each other. Some form of releasable clamping means must be provided to lock the two together during cutting operations and to release them for pivoting. The connection between them must be as accurate as possible in order to ensure that the bevel axis remains constant (that is to say, it must not be allowed to float) and so that repeatable cuts can be made.

US-A-4934233 discloses a chop saw in which the bevel pivot arrangement comprises two mutually engaging closed cylinders rotatable about a connecting pin whose axis is the bevel axis. Such a arrangement is very secure, but if each cylinder is a cast aluminum part then machining of the parts is inevitably required where they bear against each other, not only to ensure accuracy but also to provide smooth movement of one against the other.

However, such a bevel arrangement cannot be employed in a saw capable of having its table flipped over because the cylinders inevitably extend below the level of the under surface of the table and hence would stand proud of that surface during bench mode of operation and interfere with workpieces attempting to pass through the blade.

Our copending application filed simultaneously herewith under the title "Combination Table and Mitre Saw" deals with this problem. A further application also filed simultaneously under the title " A Bevel Saw Angle Indicator" deals with a related problem that, while conventional bevel angle indicating means are satisfactory when the saw is in its chop saw mode and the saw assembly and bevel pivot arrangements are easily visible, the same is not the case when the table is inverted and these components are not only under the table but also face away from the front of the saw where the operator will normally stand.

Both of these developments offer a further opportunity to improve the bevel pivot arrangement of the saws to which they relate, although it should be understood that the present invention is not limited to saws in which these two developments, further described below, are employed.

Thus it is a primary object of this present invention to provide a saw of the type initially described having an improved bevel pivot arrangement and which is particularly suited to putting into effect the developments described in the above mentioned copending applications.

In accordance with the present invention, there is provided a saw comprising a table, a pivot block fixed to a first surface of the table, a pivot member pivotally mounted with respect to the pivot block about a first axis, a saw assembly mounted on the pivot member and comprising a motor driven blade lying in a plane containing said first axis, the blade being adapted to move with respect to said pivot member in said plane to cut workpieces supported on said first surface of the table, characterised in that a bearing plate is disposed between said pivot block and pivot member and against which one of said pivot block and pivot member bear during pivoting of the pivot member with respect to the pivot block.

Such an arrangement permits a particularly smooth pivoting movement between the pivot block and pivot member reducing the friction between them. This is particularly important when the two components are constructed from cast aluminum and reduces the need for machining of these parts.

Preferably the pivot block and pivot member are cast aluminum and the bearing plate is steel.

Furthermore, the plate can be adapted to other functions which would not easily be, or at least would result in much greater wear problems, if performed by the pivot block and pivot member themselves.

Thus the bearing plate preferably further comprises an arcuate rack whose centre is said first axis and a pinion engages said rack and rotates through said engage-

ment on pivoting of the pivot member with respect to the pivot block, a dial being operatively connected to said pinion to indicate the angle of pivot of said pivot member to said pivot block. This development is the subject of our second copending application referred to above.

Preferably said plate is fixed to the pivot block and said pinion is journalled in said pivot member.

Clamping means may be provided to clamp said pivot block and pivot member together in a desired position.

Said clamping means may comprise a pin received in one of said pivot block and pivot member passing through an arcuate slot in the other of said pivot member and pivot block.

Preferably the pin is received in the pivot member and serves as the journal for said pinion, said arcuate slot being formed in the pivot block.

Preferably, index notches are formed on the periphery of said plate and a pawl member is disposed on one of the pivot member and pivot block to engage said notches in different selected pivot positions of the pivot member with respect to the pivot block so as to locate said pivot member and pivot block in one of said positions.

Preferably, said pivot member has a projection received in a groove in said table, the projection and groove having part substantially cylindrical engaging pivot surfaces whose axes coincide with said first axis.

Preferably, said projection has a second opposing part substantially cylindrical pivot surface, centred on said first axis, which bears against a corresponding surface of said plate, when said plate is fixed to the pivot block. This development is the subject of our first copending application referred to above.

The use of the plate as the opposing pivot surface, maintaining the projection in the groove in the table, so that the accuracy of the position of said first axis can be assured, provides several advantages. Firstly, it provides an accurate surface, being capable of being formed by pressing of the sheet steel, from which the plate is fabricated, without any requirement for machining. Its position in the pivot block can be adjusted to accommodate tolerances in the cast aluminium parts, so that a snug sliding fit over the projection can be achieved. Secondly, it provides a smooth bearing surface for the pivot. Thirdly, it offers a degree of flexibility which may from time to time be required if the clamp between the pivot block and pivot member is overly loosened allowing pivoting of the pivot member away from the pivot block about an axis perpendicular and approximately passing through said first axis. This is a particular risk if the saw is of the flip-over type (for example as first described in DE-A-1628992) and is in the bench saw mode where the weight of the saw assembly tends to act in this manner on the pivot member. The flexibility of the plate allows it to deform resiliently, within limits, without damage, if such pivoting should occur. This prevents possible fracture of the relatively brittle cast aluminum parts which might otherwise be a risk if the plate was not employed.

The invention is further described hereinafter, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is a side view of a saw of the type to which the present invention relates;
Figure 2 is a rear view (incomplete) of the bevel pivot arrangements for a saw according to the present invention;
Figures 3a and b are sections on the lines A-A and B-B in Figure 4a;
Figure 4a is a more complete view as in Figure 2;
Figure 4b is a section on the line C-C in Figure 4a;
Figure 4c is a part section longitudinally through a bearing plate employed by the present invention and
Figures 5a, b and c are a rear view of the bearing plate, a section on the line I-I in Figure 5a, and a section on the line II-II in Figure 5a respectively.

In the drawings, saw 10 comprises a table 16 mounted in a frame 12. The table is adapted to pivot in the frame through 180° from the position shown in Figure 1 (chop saw or mitre saw mode) to an inverted position which is not illustrated and is the bench or table saw mode.

On a first surface 16a of the table 16 is fixed a pivot block 27. To the pivot block 27 is pivotally mounted a pivot member 26 adapted to pivot about a first axis 92 which is coincident with the plane of the table 16.

A saw assembly 20 is pivotally mounted on the pivot member about a second axis 28 which is perpendicular to the first axis 92. The saw assembly 20 includes a motor driven blade 36 which lies in a plane perpendicular the second axis 28 and containing the axis 92.

The saw assembly 20 is pivotable about the axis 28 to plunge the blade into a workpiece (not shown) supported on the surface of the table 16 against a fence 17. A slot (not shown) is provided in the table 16 to receive the plunging blade and also so that the blade protrudes through the table and beyond its under surface 16b. When the table is inverted the protruding blade can be employed to cut workpieces supported on the under surface 16b (now on top) and presented to the blade.

With reference to Figures 2 and 3a, the pivot block 27 is a cast aluminium component bolted to the table 16 by screws and captive nuts 18. The pivot member 26 is likewise a cast aluminium component. It comprises a bracket 19 including axis 28 for connection of the saw assembly 20 and a projection 88 which is received in a groove 90 in the table 16. The projection and groove have first mutually engaging part substantially cylindrical pivot surfaces centred on the axis 92.

Referring to Figure 3b, a connecting bolt 44 is received in a pinion 52 rotationally received in a bore 51 of the pivot member 26. The bolt 44 passes through an arcuate slot 173 in the pivot block 27, which slot is cen-

tred on axis 92. The pivot block 27 has a part cylindrical surface 82 which mounts a pivot guide 76. The pivot guide is an arcuate component having a corresponding mating cylindrical surface 80. A bore in the pivot guide receives the bolt 44 and a recess 74 captivates a lock nut 60 received on the threaded end of the bolt 44. A clamping arrangement 67 (such as described in our copending British application No. 9218366.4) is employed to tighten the connection, clamping the pivot block 27 and pivot member 26 between the pivot guide 76 and pinion 52.

On release of the clamping arrangement, however, the pivot member 26 and pivot guide 76 are permitted to pivot about axis 92 with respect the pivot block 27, the bolt 44 moving in an arcuate path through the slot 173 in the pivot block.

The pivot guide serves two purposes; one, to close the slot 173 against the ingress of dust in any pivot position of the pivot member, and, two, to carry a fence guide (not shown), but further described in our copending application filed simultaneously herewith under the title "A Power Saw Fence Guide".

Between the pivot block and pivot member is disposed a bearing plate 46 (see also Figures 5a, b and c) which is affixed to the pivot block by two countersunk screws 47 (see Figures 4a and b), the screws being received in counter sunk bores 43 in the plate 46 and in nuts 49 captivated in slots 53 in the pivot block. Bores 55 in the pivot block, through which the screws 47 pass, are slightly elongated to allow some angular, and even a small amount of radial, adjustment (for reasons explained further below) of the plate 46 in the pivot block and with respect to the axis 92.

The bearing plate 46 serves several functions. Primarily it is a bearing plate separating the pivot block and pivot member so that wear is reduced and pivoting is rendered smoother. Also, the amount of machining required of the pivot block and pivot member is reduced because the plate 46 is formed from pressed steel sheet which obviously does not require further machining. Any tolerance inaccuracies in the pivot block 27 can be taken up by adjustment of the position of the plate 46.

The plate 46 serves three further purposes, however. Pressed out of its plane is a rack sector 48 having teeth 50 located in an arc centred on the axis 92. The teeth 50 are engaged by teeth 54 on the pinion 52, so that, when the pivot member pivots about axis 92 with respect to the pivot block, the pinion 52 is obliged to rotate in the bore 51 of the pivot member and about the bolt 44.

Referring to Figure 4a, a scale 58 is fixed to the rear of the pivot member 26. The pinion has a pointer 56. When the saw assembly is arranged precisely vertical, the scale is positioned so that the pointer is at zero on the scale. Screws 57 secure the scale to the pivot member through elongate holes 59 in the scale, so permitting some rotational adjustment of the position of the scale. Then, when pivoting of the pivot member occurs, the pointer indicates the angle (the scale of course being dimensioned appropriately) through which the pivot member (and the saw assembly) has been pivoted.

Such a rack sector would be difficult to arrange in the cast aluminum pivot block and would, in any event, firstly, require machining to provide the requisite accuracy and, secondly, would soon suffer wear in its engagement with the pinion and this would lead to inaccuracy. The scale 58 enables the bevel angle of the saw assembly 20 to be seen, but of course only from the rear of the saw 10 when in its chop saw mode as shown in Figure 1. However, when the saw table 16 is inverted to render the saw a table saw, the scale 58 is both at, and facing, the front of the saw (to the left of Figure 1) where it can easily be seen by an operator.

When in the chop saw mode, however, the scale is not easily visible from the front and so a second scale 78 is formed on the front of the pivot block 27 which is exposed by a notch 75 in the pivot guide 76, which notch also indicates the bevel angle of the pivot member.

The second further purpose of the bearing plate 46 is ancillary to its first, in that it is provided with a series of notches 61 in an arc centred on the pivot axis 92. These notches coincide with coarser notches 63 in the pivot block 27. The pivot member has a toggle lever or pawl member 62 positioned thereon and which has a tooth 64 adapted to engage one of the notches 61 and locate the pivot member at the angle determined by the relevant notch. Notches 61 are provided at the commonly employed bevel angles of 0°, 15°, 22.5°, 30° and 45° etc. On assembly of the saw 10, the plate 46 is only loosely fastened to the pivot block. Once the saw assembly has been connected and the saw blade is vertical, the angular position of the plate 46 is adjusted as mentioned above so that the tooth 64 squarely engages the 0° notch 61 of the plate. The screws 47 can then be tightened.

[A similar toggle lever 62' is employed to locate the pivot block at a desired mitre angle when the table has round rotatable portion (on which the pivot block is fixed) set in a fixed portion so that the saw assembly 20 can swivel about a vertical axis in Figure 1 for making mitre cuts. The fence 17 is in this event fixed to the fixed portion of the table].

The third further purpose of the bearing plate is to provide a part cylindrical surface 130, again pressed out of the steel plate, to support and locate the projection 88 in the groove 90. The projection has a corresponding part cylindrical surface 132 which bears against surface 130. These surfaces 130, 132 oppose the corresponding part cyclindrical surfaces of the projection 88 and groove 90 and likewise have axes coincident with the axis 92.

When in chop saw mode, the weight of the saw assembly tends to keep the projection in the groove 90. Even if the clamping mechanism 67 is overly loosened (for example by using a spanner on bolt head 69 of the link pin 44) the geometry of the arrangement is such

that the components are not overly stressed because the pivot member 26 is naturally pressed against the pivot block by the weight of the saw assembly.

However, in bench saw mode when the whole assembly is inverted, the weight of the saw assembly tends to prise the pivot block and pivot member apart, effectively pivoting the latter about an axis parallel to the axis 28 and located in the region of projection 88. If surface 130 was formed from parts of the pivot block 27 then the stresses imposed by this pivoting might be sufficient to fracture the relatively brittle cast aluminum. Since, however, the surface 130 is formed by a flange of the steel plate, a certain amount of flexibility is introduced which is sufficient to prevent permanent damage being caused to various components, even if the clamping mechanism should be somewhat overly loosened in the bench saw position of the saw.

It is desirable that the plate 46 be provided with a preload against the projection 88 so that there is no clearance between them which may lead to error, particularly in the bench saw mode, in the angular position of the pivot member,relative to the pivot block. Moreover, it is apparent that the angular position of the pivot member, and hence the blade 36, with respect to the table 16 is dependent on the precision with which the angular position of plate 46 is fixed relative to the pivot block 27. To enable both a preload and accurate positioning of the plate 46, two set screws 100 are provided in the table 16 which each are threaded in lock nuts 102. The screws are captivated by pressings 104,106 of the plate 46 one on each side of the screw 100. Each lock nut is captivated and held against rotation by a window 108 in the plate 46. The screws 100 are arranged on either side of the plate 46 with respect to the pivot axis 92. Simultaneous tightening of the screws 100 in the lock nuts 102 serves to draw the plate 46 vertically downwards relative to the table 16 so as to preload the projection 88. Overtightening of the screws 100 serves to clamp the projection 88, which is, of course, undesirable. Loosening of one screw 100 while tightening the other screw 100 serves to rotate the plate 46 about pivot axis 92 because the surface 130 slides over the cylindrical surface 132 of the projection 88. Such adjustment enables the position of the notch 61 which locates the pivot member 26 in the 0° position to be accurately set. Of course, before either preload or angular adjustments of the plate 46 are effected, the screws 47 are first loosened.

Because the plate 46 can be accurately set at the O° position by the means described above, and because the pivot axis 92 of the pivot member 26 is in part provided by surface 130 of the plate 46, and because the plate 46 is to an extent positioned by said axis 92 and the mating cylindrical surfaces 132 and 130, no other form of stop limiting the pivot of the pivot member 26 is required. This assumes, of course, that the notches 61 are accurately positioned, with respect to the O° position relative to the pivot surface 130 and the pivot axis 92.

Claims

1. A saw comprising a table, a pivot block fixed to a first surface of the table, a pivot member pivotally mounted with respect to the pivot block about a first axis, a saw assembly mounted on the pivot member and comprising a motor driven blade lying in a plane containing said first axis, the blade being adapted to move with respect to said pivot member in said plane to cut workpieces supported on said first surface of the table, characterised in that a bearing plate is disposed between said pivot block and pivot member and against which one of said pivot block and pivot member bear during pivoting of the pivot member with respect to the pivot block.

2. A saw as claimed in claim 1, in which the pivot block and pivot member are cast aluminum and the bearing plate is steel.

3. A saw as claimed in claim 1 or 2, in which the bearing plate further comprises an arcuate rack whose centre is said first axis and a pinion engages said rack and rotates through said engagement on pivoting of the pivot member with respect to the pivot block, a dial being operatively connected to said pinion to indicate the angle of pivot of said pivot member to said pivot block.

4. A saw as claimed in any preceding claim, in which said plate is fixed to the pivot block.

5. A saw as claimed in claims 3 and 4, in which said pinion is journalled in said pivot member.

6. A saw as claimed in any preceding claim, in which clamping means are provided to clamp said pivot block and pivot member together in a desired position.

7. A saw as claimed in claim 6, in which said clamping means comprises a pin received in one of said pivot member and pivot block passing through an arcuate slot in the other of said pivot member and pivot block.

8. A saw as claimed in claim 7 when dependent on claim 3, in which said pin is received in the pivot member and serves as the journal for said pinion, said arcuate slot being formed in the pivot block.

9. A saw as claimed in any preceding claim, in which index notches are formed on the periphery of said plate and a pawl member is disposed on one of the pivot member and pivot block to engage said notches in different selected pivot positions of the pivot member with respect to the pivot block so as to locate said pivot member and pivot block in one of said positions.

10. A saw as claimed in any preceding claim, in which said pivot member has a projection received in a groove in said table, the projection and groove having part substantially cylindrical engaging pivot surfaces whose axes coincide with said first axis.

11. A saw as claimed in claim 10 when dependent on claim 4, in which said projection has a second opposing part substantially cylindrical pivot surface, centred on said first axis, which bears against a corresponding surface of said plate.

Patentansprüche

1. Säge mit einem Tisch, einem an einer ersten Fläche des Tisches befestigten Schwenkblock, einem relativ zum Schwenkblock um eine erste Achse schwenkbar montierten Schwenkelement, einer Sägeanordnung, die am Schwenkelement befestigt ist und ein motorgetriebenes Sägeblatt hat, das in einer die erste Achse enthaltenden Ebene liegt, wobei das Sägeblatt dazu ausgestaltet ist, bezüglich des Schwenkelements in der Ebene bewegt zu werden, um Werkstücke zu sägen, die auf der ersten Fläche des Tisches abstützend gehalten sind, dadurch gekennzeichnet, daß zwischen dem Schwenkblock und dem Schwenkelement eine Lagerplatte angeordnet ist, gegen die entweder der Schwenkblock oder das Schwenkelement während der Schwenkbewegung des Schwenkelements relativ zu dem Schwenkblock gelagert ist.

2. Säge nach Anspruch 1, bei der der Schwenkblock und das Schwenkelement aus Aluminiumguß und die Lagerplatte aus Stahl bestehen.

3. Säge nach Anspruch 1 oder 2, bei der die Lagerplatte außerdem einen gebogenen Zahnabschnitt hat, dessen Mittelpunkt mit der ersten Achse zusammenfällt, bei der ein Ritzel mit dem Zahnabschnitt eingreift und sich wegen des Eingriffs bei einer Schwenkbewegung des Schwenkelements relativ zu dem Schwenkblock dreht, und bei der eine Anzeige funktional mit dem Ritzel verbunden ist, um den Schwenkwinkel des Schwenkelements relativ zu dem Schwenkblock anzuzeigen.

4. Säge nach einem der vorhergehenden Ansprüche, bei der die Platte an dem Schwenkblock befestigt ist.

5. Säge nach einem der Ansprüche 3 und 4, bei der das Ritzel in dem Schwenkelement gelagert ist.

6. Säge nach einem der vorhergehenden Ansprüche, bei der Klemmmittel vorgesehen sind, um den Schwenkblock und das Schwenkelement in einer gewünschten Position zusammenzuklemmen.

7. Säge nach Anspruch 6, bei der das Klemmittel einen Stift enthält, der entweder im Schwenkelement oder im Schwenkblock aufgenommen und durch einen gekrümmten Schlitz geführt ist, der jeweils in dem anderen Teil gebildet ist, also entweder im Schwenkblock oder im Schwenkelement.

8. Säge nach Anspruch 7, sofern abhängig von Anspruch 3, bei der der Stift in dem Schwenkelement aufgenommen ist und als Lagerung für das Ritzel dient, und bei der der gekrümmte Schlitz in dem Schwenkblock ausgebildet ist.

9. Säge nach einem der vorhergehenden Ansprüche, bei der an dem Umfang der Platte Einrastkerben ausgebildet sind und bei der entweder am Schwenkelement oder am Schwenkblock ein Klinkenbauteil vorgesehen ist, um in verschiedenen ausgewählten Schwenkpositionen des Schwenkelements relativ zum Schwenkblock mit den Kerben einzugreifen, um so das Schwenkelement und den Schwenkblock in einer der Positionen zu arretieren.

10. Säge nach einem der vorhergehenden Ansprüche, bei der das Schwenkelement einen Vorsprung hat, der in einer Nut in dem Tisch aufgenommen ist, wobei der Vorsprung und die Nut teilweise im wesentlichen zylindrische, miteinander eingreifende Schwenkflächen haben, deren Achsen mit der ersten Achse zusammenfallen.

11. Säge nach Anspruch 10, sofern abhängig von Anspruch 4, bei der der Vorsprung eine zweite gegenüberliegende teilweise im wesentlichen zylindrische Schwenkfläche hat, deren Mittelpunkt mit der ersten Achse zusammenfällt und die gegen eine zugehörige Fläche auf dem Tisch anliegt.

Revendications

1. Scie comprenant une table, un bloc à pivot fixé sur une première surface de la table, un élément à pivot monté de manière pivotante par rapport au bloc à pivot autour d'un premier axe, un ensemble de scie monté sur l'élément à pivot et comprenant une lame motorisée se trouvant dans un plan contenant ledit premier axe, la lame étant adaptée pour se déplacer par rapport audit élément à pivot dans ledit plan pour couper des pièces à usiner supportées sur ladite première surface de la table, caractérisée en ce qu'une plaque d'appui est disposée entre lesdits bloc à pivot et élément à pivot et contre laquelle un desdits bloc à pivot et élément à pivot prend appui pendant le pivotement de l'élément à pivot par rapport au bloc à pivot.

2. Scie selon la revendication 1, dans laquelle le bloc à pivot et l'élément à pivot sont en aluminium coulé et la plaque d'appui est en acier.

3. Scie selon la revendication 1 ou 2, dans laquelle la plaque d'appui comprend en outre une crémaillère arquée dont le centre est ledit premier axe et dans laquelle un pignon s'engage dans ladite crémaillère et tourne en raison dudit engagement lors du pivotement de l'élément à pivot par rapport au bloc à pivot, un cadran étant connecté de manière opérationnelle audit pignon pour indiquer l'angle de pivot dudit élément à pivot par rapport audit bloc à pivot.

4. Scie selon l'une quelconque des revendications précédentes, dans laquelle ladite plaque est fixée au bloc à pivot.

5. Scie selon les revendications 3 et 4, dans laquelle ledit pignon est tourillonné dans ledit élément à pivot.

6. Scie selon l'une quelconque des revendications précédentes, dans laquelle des moyens de serrage sont prévus pour maintenir ensemble lesdits bloc à pivot et élément à pivot dans une position désirée.

7. Scie selon la revendication 6, dans laquelle lesdits moyens de serrage comprennent une broche reçue dans l'un desdits élément à pivot et bloc à pivot et passant à travers une fente arquée dans l'autre desdits élément à pivot et bloc à pivot.

8. Scie selon la revendication 7 quand elle dépend de la revendication 3, dans laquelle ladite broche est reçue dans l'élément à pivot et sert de tourillon audit pignon, ladite fente arquée étant formée dans le bloc à pivot.

9. Scie selon l'une quelconque des revendications précédentes, dans laquelle des encoches d'arrêt sont formées à la périphérie de ladite plaque et un élément d'encliquetage est disposé sur l'un des élément à pivot et bloc à pivot pour s'engager dans lesdites encoches dans différentes positions de pivotement sélectionnées de l'élément à pivot par rapport au bloc à pivot afin de placer lesdits élément à pivot et bloc à pivot dans une desdites positions.

10. Scie selon l'une quelconque des revendications précédentes, dans laquelle ledit élément à pivot comporte une saillie reçue dans une rainure dans ladite table, la saillie et la rainure ayant des surfaces pivots d'engagement en partie sensiblement cylindriques dont les axes coïncident avec ledit premier axe.

11. Scie selon la revendication 10 quand elle dépend de la revendication 4, dans laquelle ladite saillie a une deuxième surface pivot opposée en partie sensiblement cylindrique, centrée sur ledit premier axe, qui prend appui contre une surface correspondante de ladite plaque.

FIG.1

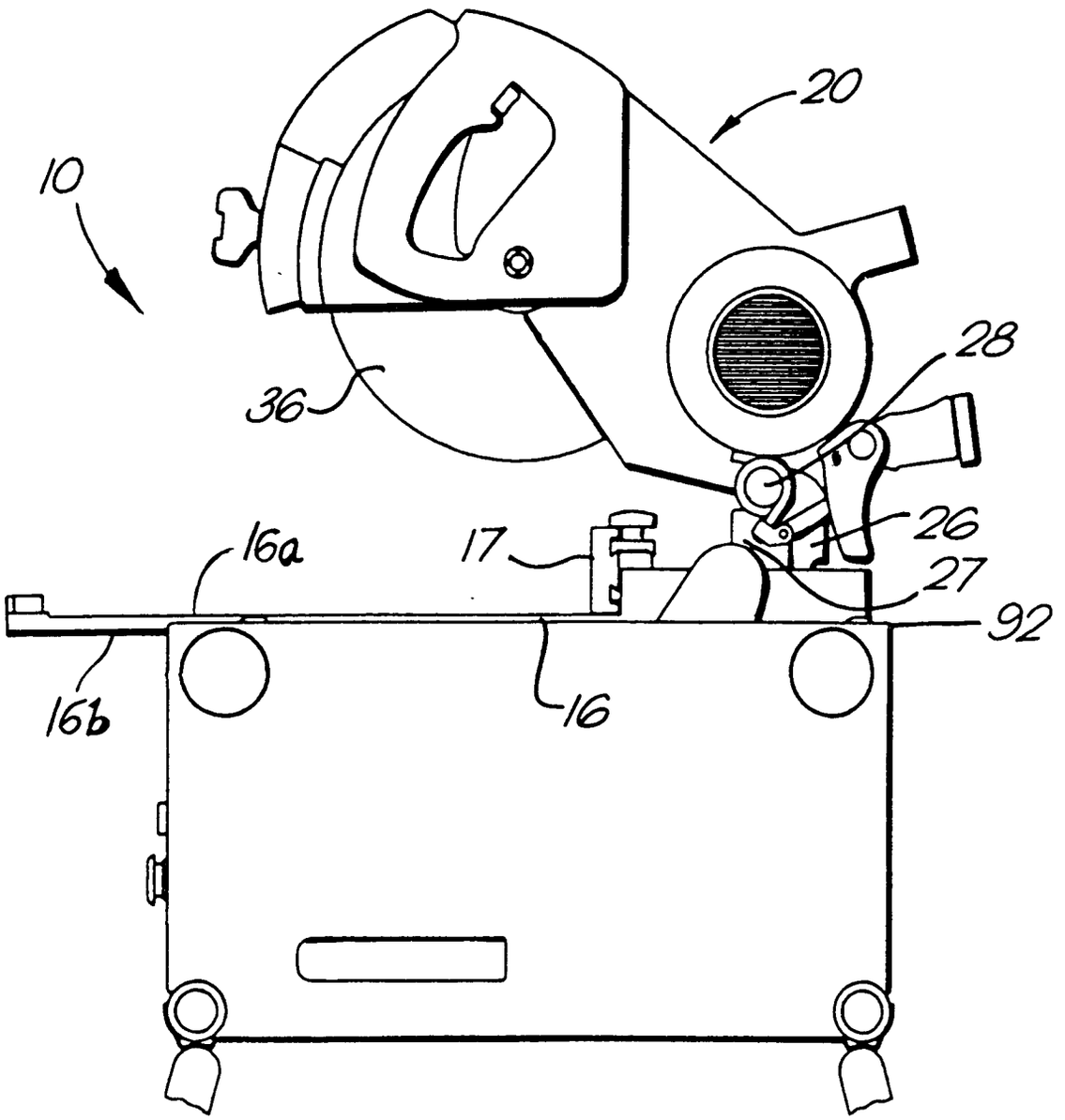


FIG. 2

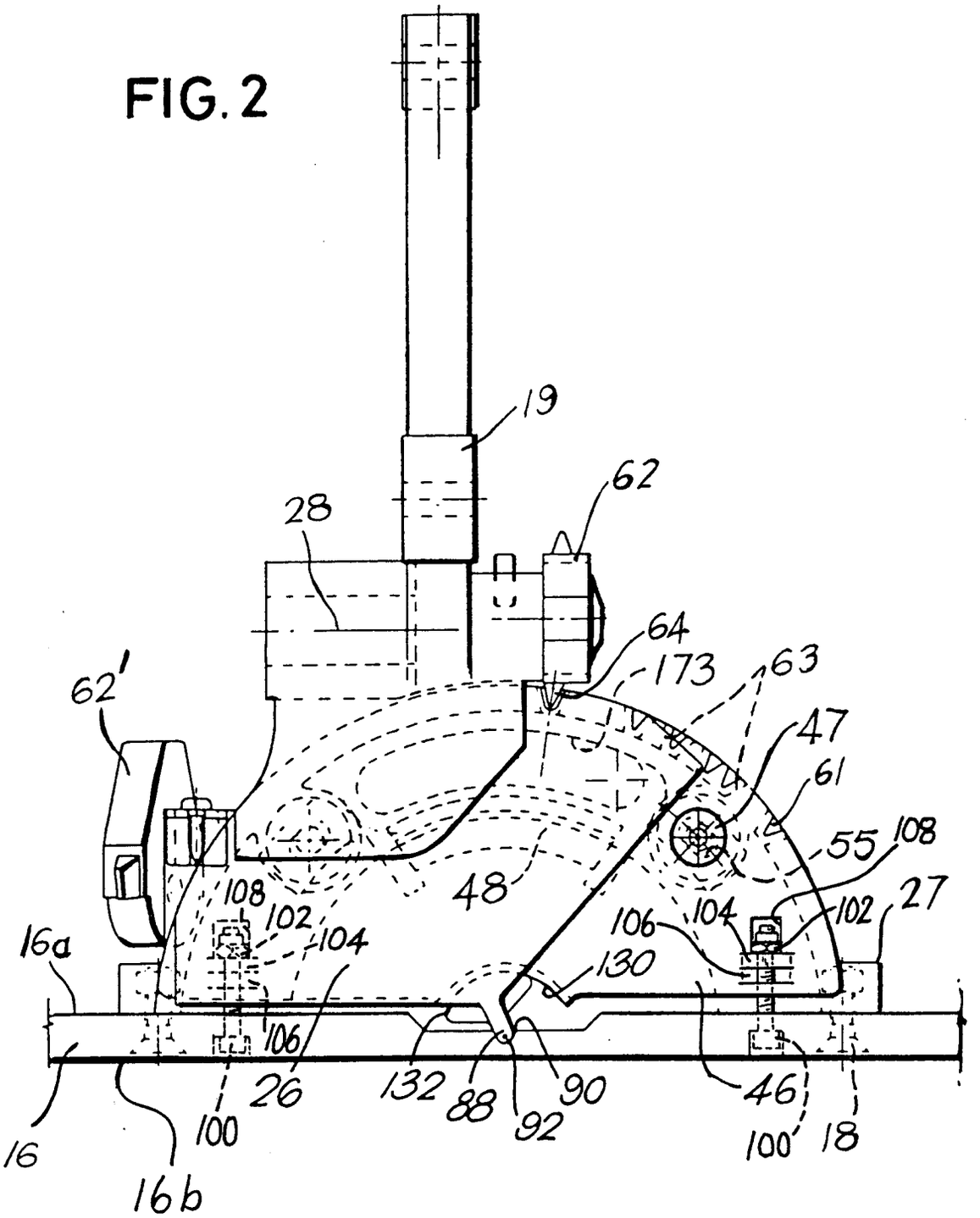

19
62
28
64
173
63
62'
47
61
55
108
48
108
102
104
106
27
16a
130
106
26
132
88
90
46
16
100
92
100'
18
16b

FIG. 3a

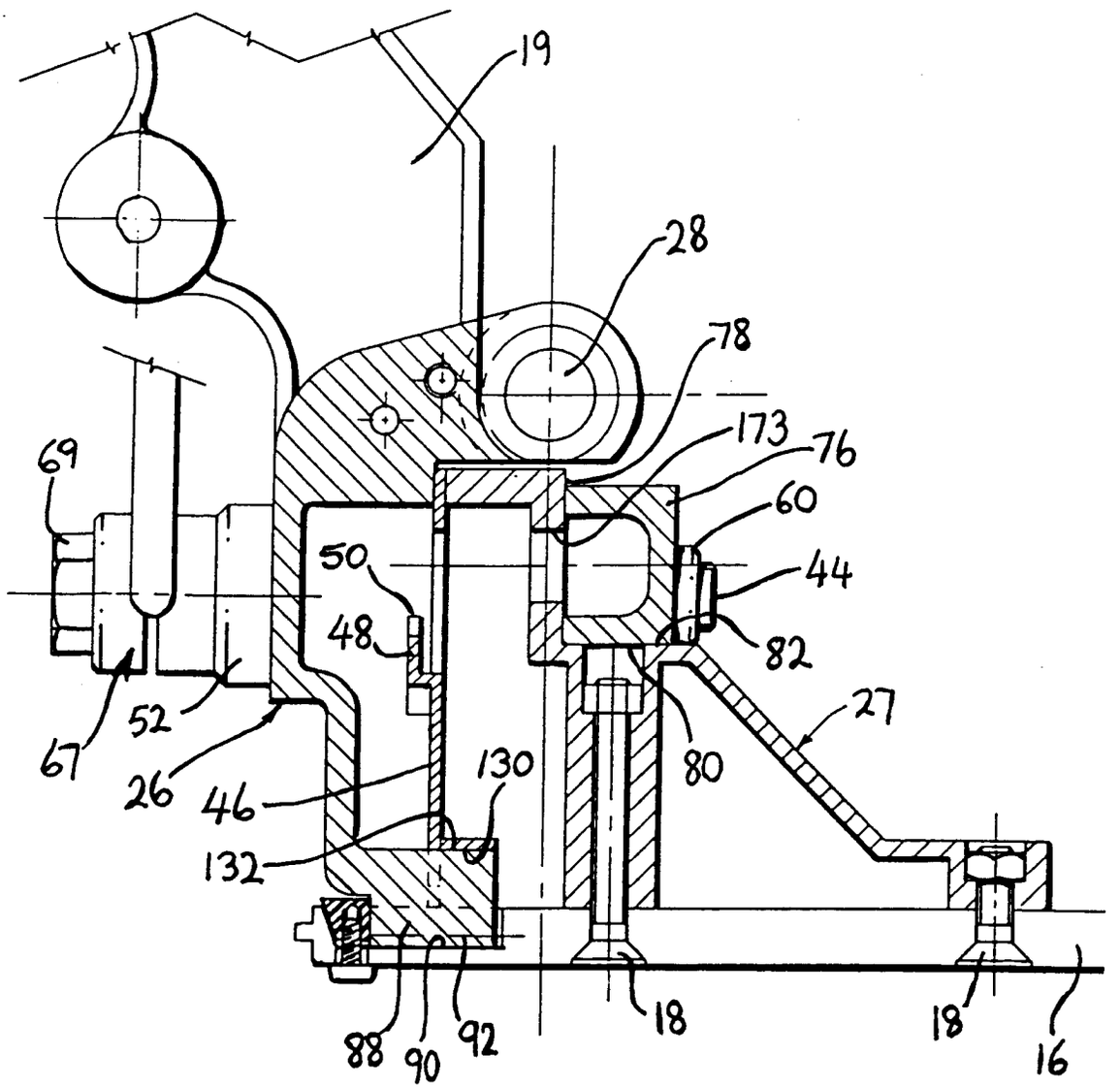

19
28
78
173
76
60
44
82
69
50
48
52
67
26
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130
132
80
27
88
90
92
18
18
16

FIG. 3b

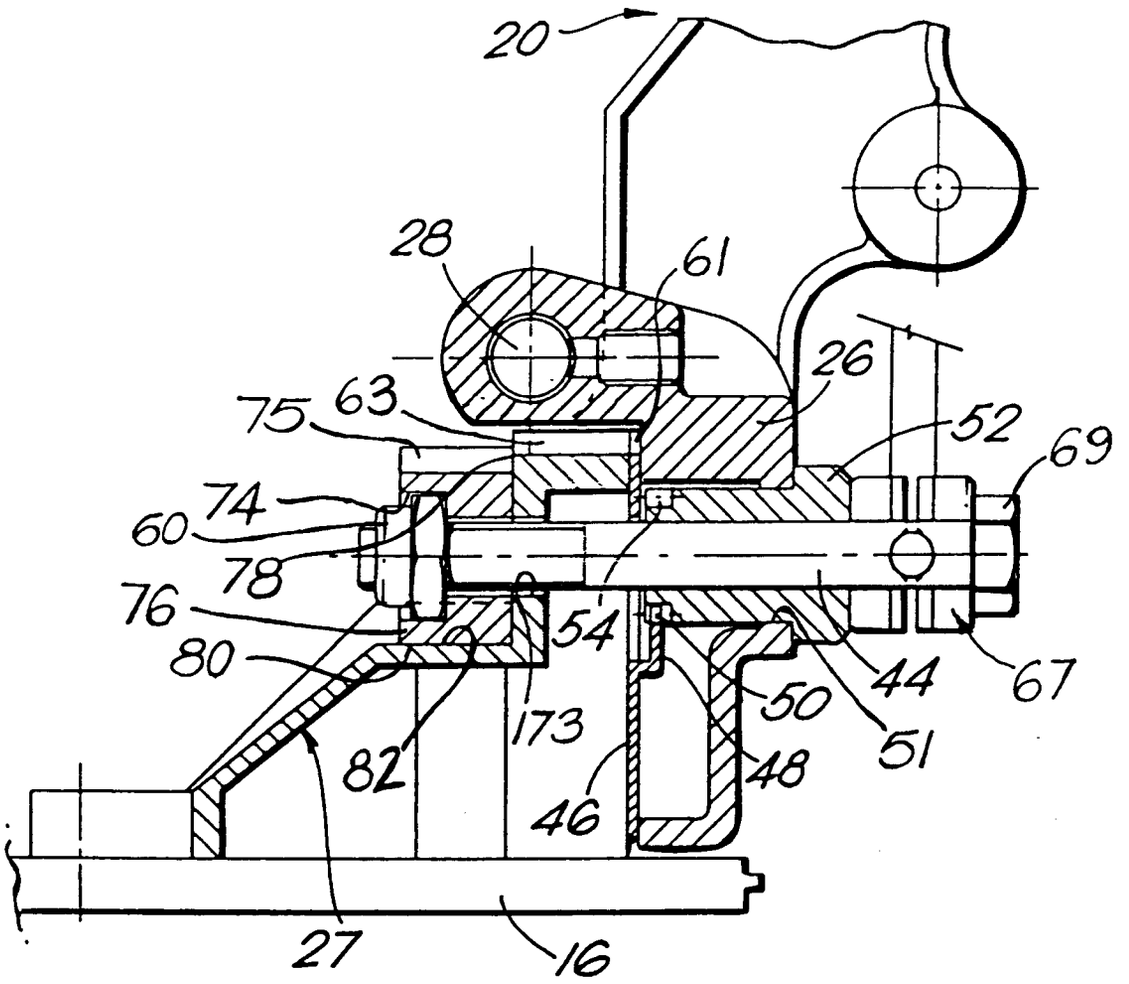


FIG. 4a

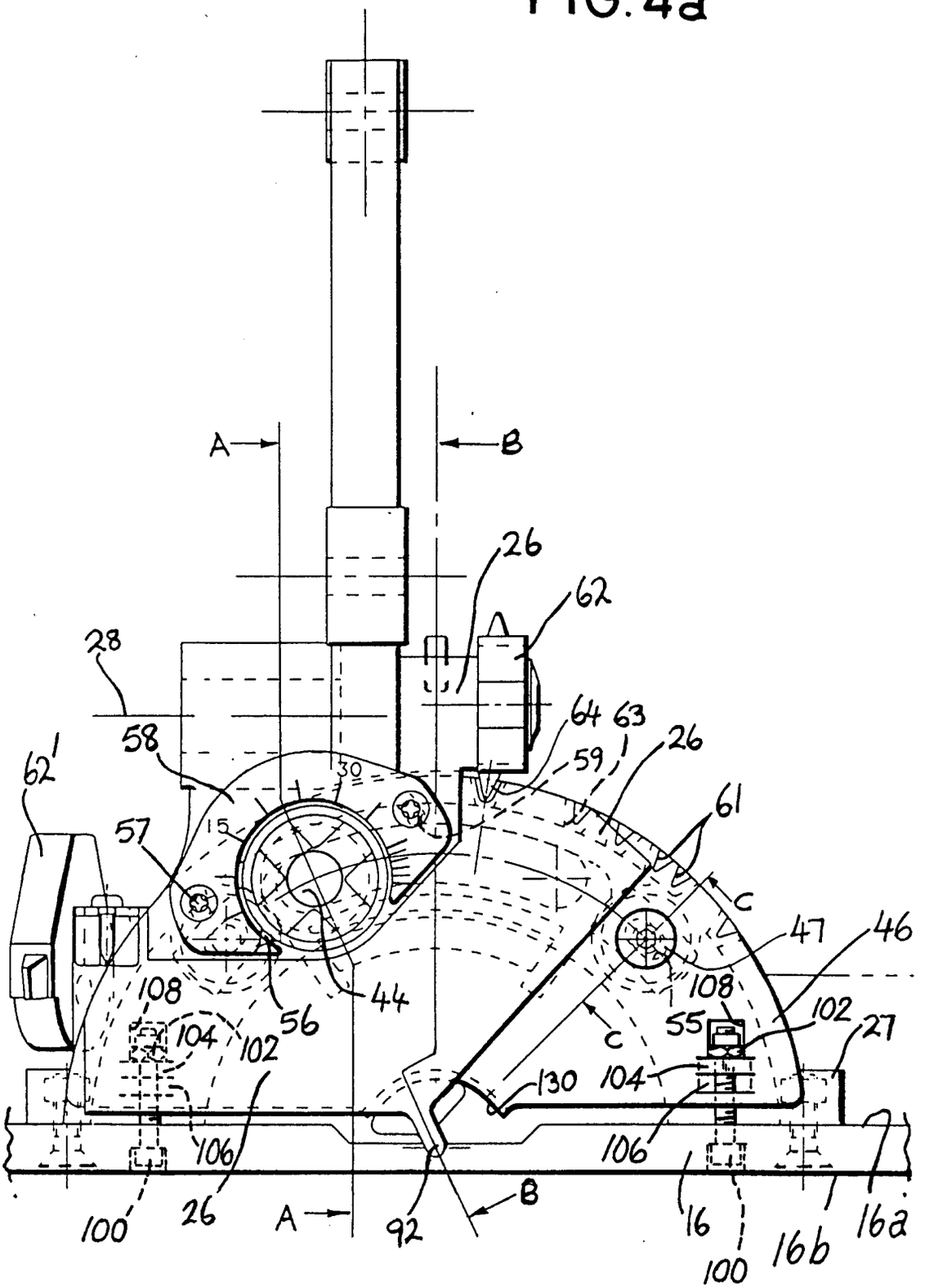
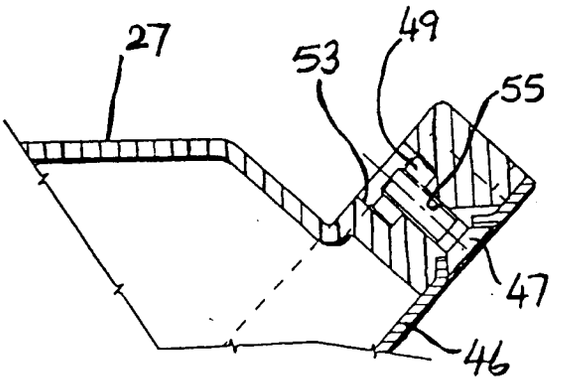

A
B
26
62
28
58
64
63
59
62'
30
15
57
61
C
47
46
108
44
56
104
102
55
27
130
106
100
92
16
16b
16a

FIG.4b



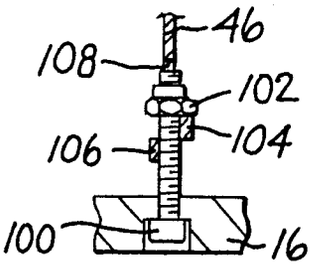


FIG.4c

FIG.5b

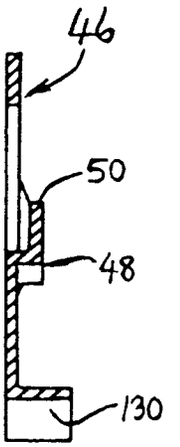


FIG.5a

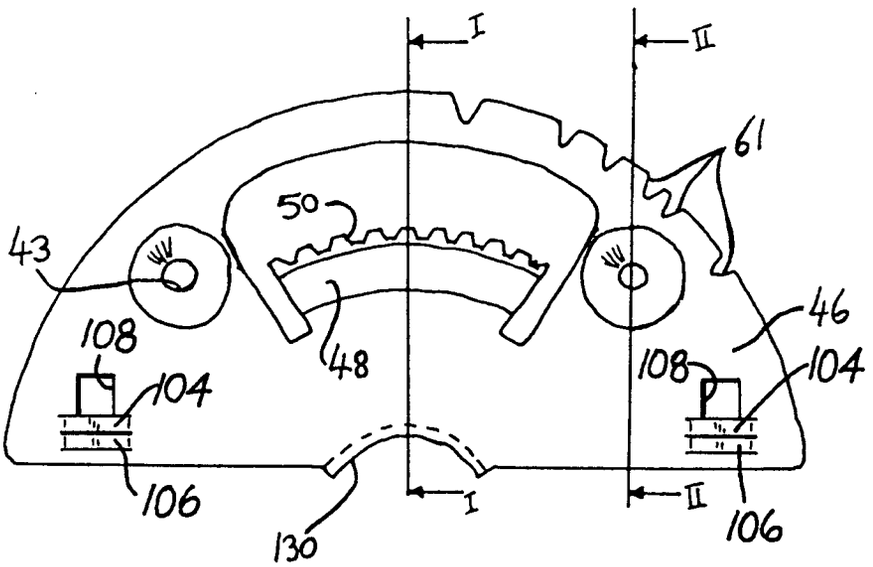


FIG.5c

