(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 608 476 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **93113611.3**

(51) Int. Cl.[5]: **B28D 1/22**, B28D 7/04

(22) Date of filing: **25.08.93**

(30) Priority: **18.01.93 IT VA930002**

(43) Date of publication of application:
03.08.94 Bulletin 94/31

(84) Designated Contracting States:
AT DE ES FR GB IT PT

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(54) Tile cutter.

(57) The end device comprises: a tool carrier (30), an operative station (11), a gauge (5) to maximize the distance from the contour line of the tile (0) to the pressure points, as well as the distance from the small roller (34) or fulcrum (f) to the push-operable scoring and cutting disc-like tool (3) or scoring weight arm which is of about 30 mm. Such fulcrum (f) engaging the bottom of the guide (2), which is placed parallel over base (1) 45 mm beyond the reaction apex (7)), The power arm of the lever is 36 cm long. At parity of power arm, the weight arm is mm 90 long, whereby the pressers (4, 4') may operate at 100 mm far from the upright (10) or at least 22 mm from the contour line (0') and 32 mm inside the corner (0''). An adjuster means (38) limits the excursion of the pressers (4, 4') avoiding that the exceeding excursion thereof operates again accidentally on any of the already cut sections of the tile.

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The present invention relates to a tile cutter end device, providing for a tile scoring and cutting, physically and functionally extensible to cutting lengths within half and one metre.

At the present state of the art, in the quantity and quality of the machines for cutting tiles and of devices embodied thereby, conspicuous advancements have been made. Such conspicuous advancements are also stimulated by corresponding development in the tile market. In fact, the variety of tiles has also remarkably developed in quality and dimensions. The larger tiles have at least one dimension, which is about one metre of length, and there may be the need to provide thereon such a long cutting. At this stage of use, of machines and tiles, the cost of the cutting machine represents the parameter which is reasonably kept in the least consideration, since the available alternative systems are extremely more expensive, more difficult to use, more dangerous and polluting and not always easily available. Thus, it is highly desirable and appreciated the provision of a machine or of a device which eliminates or at least reduces, to the minimum, the recourse to such exceptional cutting means. Of course, this must not be necessarily valid in general for any performance of the cutting machine. It is sufficient that this is valid for any particular performance; e.g., a factory manufacturing monobaked tiles, having a flat back, a thickness of about one centimetre and standard dimensions of 46 cm x 92 cm, may supply such tiles to specialized operators and/or tilers, for the outer coating of buildings. It could be extremely important in the exercise of their profession that these manufacturers will make this same work for years and tenths by getting a very light machine, weighing not more than 12 kg, bringing it with himself, up, down and along the building planking, and capable of cutting optimally such kind of tiles and their sections, in all directions. This may be sufficient, even if other cutting machines, heavier and more expensive can furnish, in addition to these performances, further performances, but performances substantially corresponding in the cut of the tiles implied. As a matter of fact, the advantages offered by these special machines are such to amortize their cost in very few days, if not in a few hours. In fact, the cost of a tile-cutting machine corresponds to about seven hours of wage of a tiler, or to the cost of about five tiles. Thus, at parity of cutting results, a lighter and/or quicker machine, is immediately more convenient than others. From another point of view, e.g. that of investment, it is preferable to have a set of four special machines, instead of a single electric machine of corresponding price, whose operating expenses would be ten times higher, in term of investment, waste of time and other aforesaid drawbacks. Regarding to the improvements applied thereto, even if they apparently seem to be of scarce importance, they alone justify a machine change; it may be considered that if during the life of a machine five tiles more are wasted, this is sufficient to render convenient the improved machines and obsolete all the other machines, even if new but affected by that drawback. And this may be true, not in general, but simply at level of that user, and for that use and in comparison with all the machines of the market. This determines an evaluation criterion of the arrangements which favour the perfect operation of the machine, even if apparently not very important. It must be considered that the tilers, when using professionally such machines for a certain work, they use, at least for hours, the same kind of tile; thus only in exceptional cases the tiler would need to bring more than one machine and only in very rare cases to carry more of them.

A very light machine with push-operable tool carrier is disclosed by FR A, 2553024 in the name of the present applicant. Conventionally, such machine is manufactured in three small embodiments without any claim of professionalism. In this machine are present some arrangements, which demonstrate to be winning and capable of professional and specialistic development.

The invention as claimed is intended to remedy these drawbacks. The inventors with ingenious perception have conceived a tile cutter end device, providing the tile scoring and cutting, physically and functionally extensible to cutting lengths within half and one metre, with arrangements and dimensioning aimed to: 1) to reduce the weight of the cutting machine to about one, half with respect of the professional machines of the corresponding configuration, e.g., those described and claimed in the patent application of the same applicant No PCT/EP 91/02527, resulting in respective ratios, between the three corresponding configurations, of Kg 15,5/Kg 6,7; Kg 16,5/Kg 9,5; Kg 34/Kg 12; 2) to increase the cutting performances, particularly in diagonal, thanks to a very deep scoring, provided by the push-operable tool carrier and by the very sturdy frame of the machine. The sturdy frame of the machine furnishes a reaction substantially without dispersions of energy; 3) the application of the cutting pressure: a) as localization, being provided in points which are the most internal and carrying possible, and b) as way by limiting the stroke of the pressers. This is particularly useful in diagonal cut, thanks to the gauge which is offset fulcrumed, whereby the corner of the tile encumbers less with respect to the parts of the machine. At parity of force application point, the ratio: power arm/weight arm, is higher, while for limiting the stroke an adjustable screw with knob is provided; 4) to offer a

clear display of the position of the tile and of the sections to be cut and to render the cutting of small sections possible on tiles having an average ratio: size/difficulty of cut, even in diagonal. The swingable gauge, per se known, as said, is offset fulcrumed and provided with a double scale: the first furnishing side distances and the second diagonal distances, with autonomous indices of reading with references disposable during the cut, the positioning or the removal of the tile or of its sections; 5) the employment of a push-operable tool carrier of the kind disclosed in the patent application Nº EP 92116115.4, according to an embodiment appropriated to the use with this machine; 6) a tramplable stopping pedal functioning also by hanging hook and/or 7) a device operating an anti-slipping effect in the way of "sealskin".8) The provision of a tool carrier with a screw adjuster which may be optionally used to limit the stroke in the interval adapted to the thickness of the tile. This is necessary since the tool carrier has a stroke of excursion embracing the whole field of thickness of the tiles (within 5 and 20 mm),and in the part of the stroke exceeding that necessary to provide the cut (within 1 and 3 mm) it could involve the parts resulting from the cut; breaking them accidentally.

In accordance with a preferred embodiment of the present invention the machine is made of reduced weight.The weight is reduced to about one half of a conventional professional machine e.g. according to the patent application of the same applicant Nº PCT/EP 91/02527 of equivalent configuration. The weight are as follow: for a machine having the cutting power of tile of 52 cm of side or diagonal 6,7 kg versus Kg 15,5; for a machine having the cutting power of tile of 62 cm of side or diagonal 9,5 kg versus kg 16,5; and, for a machine having the cutting power of tile of 92 cm of side or diagonal about 12 kg versus 34 kg. For obtaining good results from these machines despite of their so reduced weight, and correspondingly reduced sturdiness to resist to the cutting pressure, applied by a push-operable tool, having a lower advantage ratio, since operating relatively inside of the tile, it is necessary to provide a very deep scoring. But the provision of a very deep scoring, with a push-operable tool carrier, with very light machine, means to have undesirable problems of slipping of the machine, which render very difficult the scoring, particularly if the tool carrier is in a position to provide a very high pressure on the disc-like scoring tool; in fact this exalts the horizontal component which tend to induce a machine slipping. In other words these factors are in opposition and it is difficult to obtain an optimal performance all together. However, in case that the machine is rested against a fixed body, in order to eliminate any horizontal component of the scoring push. Thus the scoring pressure may be exalted and more and more deepened, whereby to reduce the strength of the tile to the cut at a level lower than the stress provided by the machine, despite lighter than 7 kg,, with a cutting press provided inside, i.e., with lever arm ratio not very advantageous. Thus the tile, deeply scored as wanted and stressed in a point relatively internal, has good chances to cut easily and correctly. Whereas, when the rest against a fixed body is not possible the machine is, to this effect, provided with a tramplable pedal, workable by the operator, to prevent the slip of the machine. This pedal is also shaped in order to provide an hook, for a possible hanging or for togging, when possible, with pin or the like.

In accordance with another preferred embodiment of the present invention the tool carrier is realized in accordance with the principle of patent application Nº EP 92116115.4 but in a manner congruous with this kind of cutting machine. Thus, even if with this machine it is not possible to cut with good results the tiles "Enduro", there is a very wide range of tiles which for their cut, instead of this machine, would require machines whose weight and cost are twice as much, which are slow and scarcely handlable and that, in at least the 50% of the cuts, oppose difficulties in the positioning of the tile.

One way of carrying out the invention is described in detail below, with reference to drawings, which illustrate only one specific embodiment, in which:

Figure 1 is the perspective exploded view, of the shortest of the tile-cutters machines, according to the present invention; some of its members are broken to show, at several levels, the otherwise hidden details; other parts are in dashed lines.

Figure 2 is the plane view, of the machine of figure 1, in assembled condition, wherein the gauge is swung to 90º and the reference or small square is placed at about 2/3 of the maximum excursion, the supports for the tile being disposed.

Figure 3 is substantially the repetition of Figure 2, but with the gauge inclined at 45º.

Figure 4 is the perspective view, of the head side of the machine, substantially in the same conditions of figure 2, but with a tile being worked and in the attitude wherein a scoring is being effected; moreover in phantom lines is shown a tool carrier at the end of the stroke, i.e., in the attitude wherein it leaves the head end of the tile after having scored it. The screw adjuster is set in order to provide a downward stroke of 2 mm, beyond the upper side of the tile.

Figure 5 is substantially the repetition of Figure 4, but showing a machine with a tile in the conditions of figure 3. The tool carrier is shown by continuous lines in both positions. Even here the screw adjuster is set in order to provide a downward stroke of 2 mm beyond the upper side of the tile.

Figure 6 is the perspective view from underside of the very light machine frame.

Figure 7 is the detailed perspective exploded view of a longer machine and relating to the figures 12 and 13 which, only, are provided with support arm for the tile and include a frame extension, which is duly connected to the main frame of the machine.

Figure 8 is the side detailed view of the section of the machine including the tool carrier, which is positioned at the end of the scoring stroke. A breaking in the base shows the resisting condition of the anti-slipping member, better shown at the left end of Figure 14.

Figure 9 is substantially the repetition of Figure 8, but while the tool carrier is performing the cutting and with the anti-slipping member in collapsed condition, better shown at the right end of Figure 14.

Figure 10 is the perspective detailed view of the tool carrier duly broken to show the spring suspension and the function of the excursion adjuster.

Figure 11 is the perspective view, of the shortest machine, according to the present invention.

Figure 12 is the perspective view, of the machine of average length, according to the present invention.

Figure 13 is the perspective view, of the longest machine, according to the present invention.

Figure 14 is a schematic, symbolic view of the behaviour of the contact grapnels in three conditions, respectively from left to right, of resistance, rest and collapsed.

Referring now to the figures of the drawings, a machine tile-cutter end 01, providing the tile scoring and cutting, physically and functionally extensible to cutting lengths within half metre, (figures 1 and 11) and one metre (figure 13) comprises, conventionally, a frame 1, made of light alloy, including two pieces 1', 1'' (figure 7). The frame 1 has two uprights 10, 10' emerging at its ends. Said uprights 10, 10' hold at their upper ends a bridge-like guide 2. The bridge-like guide 2 shiftably receives therealong a tool carrier 30. The tool carrier 30 is provided, at its bottom, with a disc-like tool 3, and comprises also a cutting or rupturing tool in the form of a pair of fins 4', 4''. Moreover the machine comprises a gauge 5, which is provided with a journal 50, a goniometer 05 and its fastening 56. The gauge 5 includes a small reference square 55, per se known and the frame 1 comprises resiliently suspended plates 6 and 6'. Moreover the machine comprises, in combination, a push-operable tool carrier member 30 and an operative station 11, placed at the end of the stroke of the tool carrier 30, i.e. substantially at the base of upright 10 which supports the guide 2 of the tool carrier 30. In this operative station 11 terminates the wedge-like relief 7, which provides a reaction to scoring and cutting. The guide 2, which directs the tool carrier 30 is in the form of bridge. It is stationary and held by the uprights 10, 10' of the frame 1. It is exactly parallel to the reaction means 7. Such reaction means 7 react to the scoring push and to the cutting impact, which are reciprocally complementary.

According to the present invention the gauge 5, which is of the swinging kind, has the reference centre, for the cutting of the tile 0, which is coaxial to the axis of the guide 2. The gauge 5 has its swinging centre 50 placed in a position which is some millimetres within a quadrant which is included by the axes of the bridge-like guide 2 and the adjacent side of the tile-rest plate 6 for the tile 0. The arrangement is such that, the vertical plane of rest and reference for the tile 0, stands substantially at the end of the reaction wedge-like relief 7, which, in turn, stands at a distance $d < D$ from the front of the upright 10 or from the engaging point of the leading section 34'', of the tool carrier 30. Such engaging point is provided by the same roller or wheel 34, which rolls against the base 2' of the guide 2 and provides, with its tangent f, the fulcrum of the second class lever, comprised by the tool carrier 30. The lever weights R_d, R_p, are provided, in turn, respectively, by the disc-like tool 3 and by the presser fins 4, 4'. The lever weight arms are, respectively comprised by the distance dd from the fulcrum f to the disc-like tool 3.and by the distance from the fulcrum f to the pressers pins 4, 4'. The lever power arm bp is comprised by the distance from the fulcrum f to the end 30' of the driving arm of the tool carrier 30, wherein the distance δf from the fulcrum f to the leading point 34''of the tool carrier 30 or engaging point, more the cutting weight arm br, is longer, by at least 2 cm, than the distance d comprised from the wedge-like relief 7 to the passive engaging point 134 of the upright 10, i.e.:

$$(\delta f + dp) - d = 2 \text{ cm}.$$

In accordance with a preferred embodiment of the present invention the tile cutter end device comprises, in combination, a push-operable tool carrier 30, an operative station 11, a gauge 5 to comply with excursion requirements in various directions and with maximization of the distance comprised from the contour line of the tile 0 to the

point wherein the pressure is applied. The distance comprised from the leading end 34'' of the tool carrier 30, to the disc-like tool 3 is maximized as well. Such leading end 34'' is comprised by the small roller or wheel 34, acting as a fulcrum f, against the bottom side of the bridge-like guide 2. The bottom side of the bridge-like guide 2, is kept parallel over the base 1, at a distance of 45 mm from the crest of the wedge-like relief 7, which is the means reacting to the scoring and cutting stresses. Thus, the disc-like tool 3 has a scoring weight arm which is of about 30 mm. The power arm of the second class lever is 36 cm long, and at parity of power arm, the cutting weight arm is of mm 90, whereby the cutting pressers 4, 4', provide the cutting pressure on the tile 0, at a distance of 100 mm from the upright 10, i.e., at least 22 mm inside of the contour line 0', of the tile 0; corresponding to 32 mm inside of the corner 0'', when the tile is placed at 45o.

To regain the loss of advantage, depending from the particular cutting configuration in the operative station 11, the effectiveness of the scoring means 30, 3 and of the means 7 of reaction to scoring, are correspondingly increased The wedge-like means 7, providing the cutting reaction, are placed at a distance comprised within 65 and 125 mm from the upright 10 at the end of the scoring stroke of tile 0. Adapted means 5 are provided to clearly display the position of the tile 0 and of the sections to be cut and to render the cutting of small sections, parallel to the sides and in diagonal, possible. The push-operable tool carrier 30 comprises spring means 8, 8', adapted to support the tool carrier 30. Said spring means 8, 8' are comprised by two spiral springs 8, 8', which subtend, in the way of a second class pulley, a small roller 80, which comprises the same tool carrier hanging member 30. A reaction is provided therein, whereby the fulcrum f ,of the tool carrier 30, engages the base 2', of the bridge-like guide 2 and determines the landing of the cutting fins 4, 4' against the upper surface of the tile 0, exactly at the operative station 11. The arrangement of push-operable tool carrier 30, is such that, all over the coarse of the scoring, its driving end 30', in any working position, stands upright of the machine base 1. Whereas, on cutting, the same lever driving end 30', stands at a distance of at least 33 cm from the nearest end 10''.

The aforesaid and following parameters and particularly the distance of 45 mm from the base 2' of the bridge-like guide 2 (fixed and rigid) to the crest 7 engaging the tile, provides enough room for receiving and working, by scoring and cutting, tiles having a thickness within 3 and 25 mm, without any adjusting. However, it is also necessary that the tool carrier 30, is provided with a sufficient stroke, to cover the whole field of tile thickness (within 3 and 25 mm). However, there is the risk that in the part of the available stroke exceeding 1-3 mm which is the necessary stroke to perform cutting the cutting fin pressers 4, 4' may engage the sections resulting from cutting, breaking them accidentally. Thus the tool carrier 30 is provided with a screw adjuster 38, which may be optionally used, to limit the stroke to an interval congruous to the thickness of the tile. This screw adjuster 38 may be set each time that the thickness of the tile is changed. Such setting may be made simply, by getting the pressers 4, 4' engaged with the upper side of the tile, by putting the screw end 38', of the adjuster 38 in touch of tangency with the small roller 80 and finally retracting the latter of a fraction of round (e.g. within 1/4 of round and 1 round).

The swingable gauge 5, per se known, according to the present invention, in order to comply with excursion in useful directions and in order to maximize the distance comprised from the contour line 0' of the tile 0 to the point wherein the cutting pressure is applied, has its hinging centre 50 positioned at a distance of 13 mm, towards the front side of the machine, where the gauge 5 projects more with respect to the centre line of the plane of the bridge-like guide 2. It is advanced of the same distance, with respect to the line of alignment of the gauge 5, of the tile-rest planes 6, 6' and of the wedge-like relief 7. Above the swinging centre 50, the swingable gauge 5 includes a small pool 11', to provide a space for giving free movement to the disc-like tool 3. The small pool 11' is delimited, towards the tile 0, by a narrow ridge 12 which provides a side rest for the same tile 0. Said ridge 12 comprises a notch 12', which provides an indication of the point wherein, the corner 0'' of the tile 0, set diagonally, is to be placed, to coincide with the running plane of the disc-like tool 3. The swingable gauge 5 is also provided with a cylindrical guide 05', comprising even an hinge for the small orthogonal square 55, which thus may be swung by 180o. The small orthogonal square 55 with its side 55', provides a tile side rest which is thinned as the thickness of the thinnest tile to be worked e.g., 3 mm, along a section corresponding to the minimum width which may be cut, or to the difference of dimensions between the latter and the width of cutting fin 4'. The operative station 11 comprises, at both sides of the reaction cutting wedge-like relief 7, the holes 70, for getting clear from tile fragments or chips, which could encumber the various parts which have to match. The cutting machine is provided with a pedal 9, which may be positioned and trampled by the operator, to keep it stationary upon scoring (figures 1, 2, 3, 6, 7, 11, 12, 13,). The machine is provided with an anti-slipping device 90 of the "sealskin" kind. This anti-

slipping device 90 provides an opposition to the component of the scoring push applied on the tool carrier attending to slip the whole machine. It comprises a multitude of lamellae, having triangular cross section, wherein the side facing the operator, forms, with the bottom of the machine, an acute angle, while the opposed side, forms with the same bottom of the machine, an obtuse angle. The device has substantially nature of elastomeric body, which is, as said, lamelled and made of elastomeric material, having a very high coefficient of grip. However, its rigidity, is sufficient to determine, with the push, a trend to lift the machine (figure 14).

For configurations of the machine longer than 52 cm (Figures 2, 3, 7, 12, 13) the body 1 of the machine is comprised by two pieces 1', 1. These two pieces 1', 1'' are directly provided by melting, with intercoupling sections ready for being assembled by screws. At least one of the machine body sections 1', 1'' is provided with at least one tile supporting arm 99, 99', having a swinging angle of about 100o with working and rest position. Correspondingly the gauge 5, which is applied to the end device has, from the operator's side a constant extension of 20 cm, while from the opposite side has an extension respectively of 35, 45, 55 cm, according to the machine length.

In accordance with a preferred embodiment of the present invention the suspensions of the plates 6 and 6' are provided by pads 60 of foamed material, which have their main surfaces provided with double face adhesive tape.

Claims

1. Tile cutter end device, providing the tile scoring and cutting, physically and functionally extensible to cutting length within half and one metre, of the kind wherein, a single tool carrier member (30), from an end position far from the operator, provides, in immediate succession, the scoring and cutting impact, the tool carrier (30) being guided by a bridge-like guide (2) fixed and solidal to the uprights (10, 10') of the frame (1) which support strictly parallel the means (7) of reaction to the complementary scoring push and cutting impact, characterized in that it comprises, in combination: a push-operable tool carrier (30), an operative station (11), a swingable gauge (5) per se known which for complying with excursion requirements in various directions and of maximization of the distance from the contour line of the tile (0) of the point wherein the pressure is applied,. the distance from the leading end (34'') of the tool carrier (30), to the disc-like tool (3) is maximized as well, such leading end (34'') being comprised by the small roller or wheel (34) acting as a fulcrum (f), against the bottom side of the bridge-like guide (2), the bottom side of the bridge-like guide (2), is kept parallel over the base (1) at a distance of 45 mm from the crest of the wedge-like relief (7) which is the means reacting to scoring and cutting stresses, the disc-like tool (3) has a scoring weight arm which is of about 30 mm, the power arm of the second class lever is 36 cm long, and at parity of power arm, the cutting weight arm is of mm 90, whereby the cutting pressers (4, 4'), provide the cutting pressure on the tile (0) at a distance of 100 mm from the upright (10) i.e., of at least 22 mm from the side contour line (0') corresponding to 32 mm inside of the corner (0''), when the tile is placed at 45o, the loss of advantage, depending from the particular cutting configuration in the operative station (11) being regained by increasing the effectiveness of the scoring means (30, 3) and of the means (7) of reaction to scoring, the wedge-like means 7, providing the cutting reaction being placed at a distance comprised within 65 and 125 mm from the upright (10) at the end of the scoring stroke of tile (0), adapted means (5) being provided to clearly display the position of the tile (0) and of the sections to be cut and to render, the cutting of small sections, parallel to the sides and in diagonal, possible.

2. Tile cutter end device, as claimed in claim 1, wherein the push-operable tool carrier (30) comprises (8, 8') spring means, adapted to support the tool carrier (30) itself, characterized in that said spring means (8, 8') are comprised by two spiral springs (8, 8'), which subtend, in the way of a second class pulley, a small roller (80), which comprises the same tool carrier hanging member (30), whereby to provide therein a reaction which provides the engagement of the fulcrum (f) of the tool carrier (30) with the base (2') of the bridge-like guide (2) and determines the landing of the cutting fins (4, 4') against the upper surface of the tile (0) at the operative station (11).

3. Tile cutter end device, as claimed in claim 1, characterized in that the push-operable tool carrier (30) maintains, all over the scoring stroke, its handing end (30') stands upright of the machine base (1) and during cutting said handing end (30') stands at a distance of at least 33 cm from the nearest end (10'').

4. Tile cutter end device, as claimed in claim 1, characterized in that the push-operable tool carrier (30) is provided with an adjusting screw

(38) with ball grip, having an adjusting field of at least 20 mm., such adjusting screw (38) being coaxial to the axis of excursion of the small roller (80) and beyond the same.

5. Tile cutter end device, as claimed in claim 1, characterized in that the swingable gauge (5), to comply with excursion in useful directions and maximization of the distance comprised from the contour line (0') of the tile (0) to the point wherein the cutting pressure is applied, has the hinging centre (50), positioned at a distance of 13 mm, towards the front side of the machine, where the gauge (5), projects more with respect to the centre line of the plane of the bridge-like guide (2), as well as advanced of the same distance, with respect to the line of alignment of the gauge (5), of the tile-rest planes (6, 6') and of the wedge-like relief (7).

6. Tile cutter end device, as claimed in claim 1, characterized in that the swingable gauge (5) includes, above the swinging centre (50), a small pool (11'), to provide a space for free excursion of the disc-like tool (3), said small pool (11') being delimited, towards the tile (0), by a ridge (12) providing a side rest for the same tile (0), said ridge (12) having a notch (12'), to indicate the point wherein the corner (0'') of the tile (0), placed diagonally, coincides with the running plane of the disc-like tool (3).

7. Tile cutter end device, as claimed in claim 1, characterized in that the swingable gauge (5) is provided with a cylindrical guide (05') which comprises an hinge for the small orthogonal square (55), which thus may be swung by 180º.

8. Tile cutter end device, as claimed in claim 6, characterized in that the small orthogonal square (55) has its side (55'), providing a tile side rest which is thinned as the thickness of the thinnest tile to be worked e.g., 3 mm, along a section corresponding to the minimum width which may be cut, or to the difference of dimensions between the latter and the width of cutting fin (4').

9. Tile cutter end device, as claimed in claim 1, characterized in that the operative station (11) comprises, at both sides of the reaction cutting wedge-like relief (7), holes (70), for clearing tile fragments or chips, which could encumber the various parts which have to match.

10. Tile cutter end device, as claimed in claim 1, characterized in that, the machine is provided with a pedal (9), which may be positioned and trampled by the operator, to keep stationary the machine while providing the scoring with push-operable tool carrier (3).

11. Tile cutter end device, as claimed in claim 1, characterized in that the machine is provided with an anti-slipping device (90) of the a "seal-skin" kind providing an opposition to the component of the scoring push applied on the tool carrier (3) attending to move the whole machine in the pushing direction, such anti-slipping device (90) comprising a multitude of lamellae, having triangular cross section, wherein their sides facing the operator forms, with the bottom of the machine, an acute angle, while the opposed side forms, with the same bottom of the machine, an obtuse angle, such anti-slipping device (90) having substantially nature of elastomeric body which is as said lamelled and made of elastomeric material having a very high coefficient of grip, its rigidity being sufficient to determine with the push, a trend to lift the machine.

12. Tile cutter end device, as claimed in claim 1, characterized in that for machine configurations longer than 52 cm the body (1) of the machine itself is comprised by two pieces (1', 1''), which are directly provided by melting with coupling sections ready for being assembled with screws, wherein, at least one of said machine body sections (1', 1'') is provided with at least one tile supporting arm (99, 99') having a swinging angle of about 100º, with working and rest position.

13. Tile cutter end device, as claimed in claim 1, characterized in that the suspensions of the plates (6 and 6') are comprised by pads (60) of foamed material which are provided, on their main surfaces with a double face adhesive tape.

14. Tile cutter end device, as claimed in claim 1, characterized in that in the shortest configuration (c) has the base made by a single piece, has a working cutting length of 52 cm and a weight of 6,7 kg, in the average configuration (m) has the base made by two pieces (1', 1''), has a working length of 72 cm and a weight of 9,5 kg and in the longest configuration (1) has the base made by two pieces (1', 1''), has a working length (1) of 92 cm and a weight of 12 kg.

15. Tile cutter end device, as claimed in claim 1, characterized in that its frame is provided with rests of elastomeric material, whose surface of contact with the pavement has substantially nature of sealskin, whereby to provide, in a direction opposite to that of push, a maximum coefficient of grip with a component tending to lift the machine and however providing a vertical compliance parallel to the cutting direction.

FIG.1

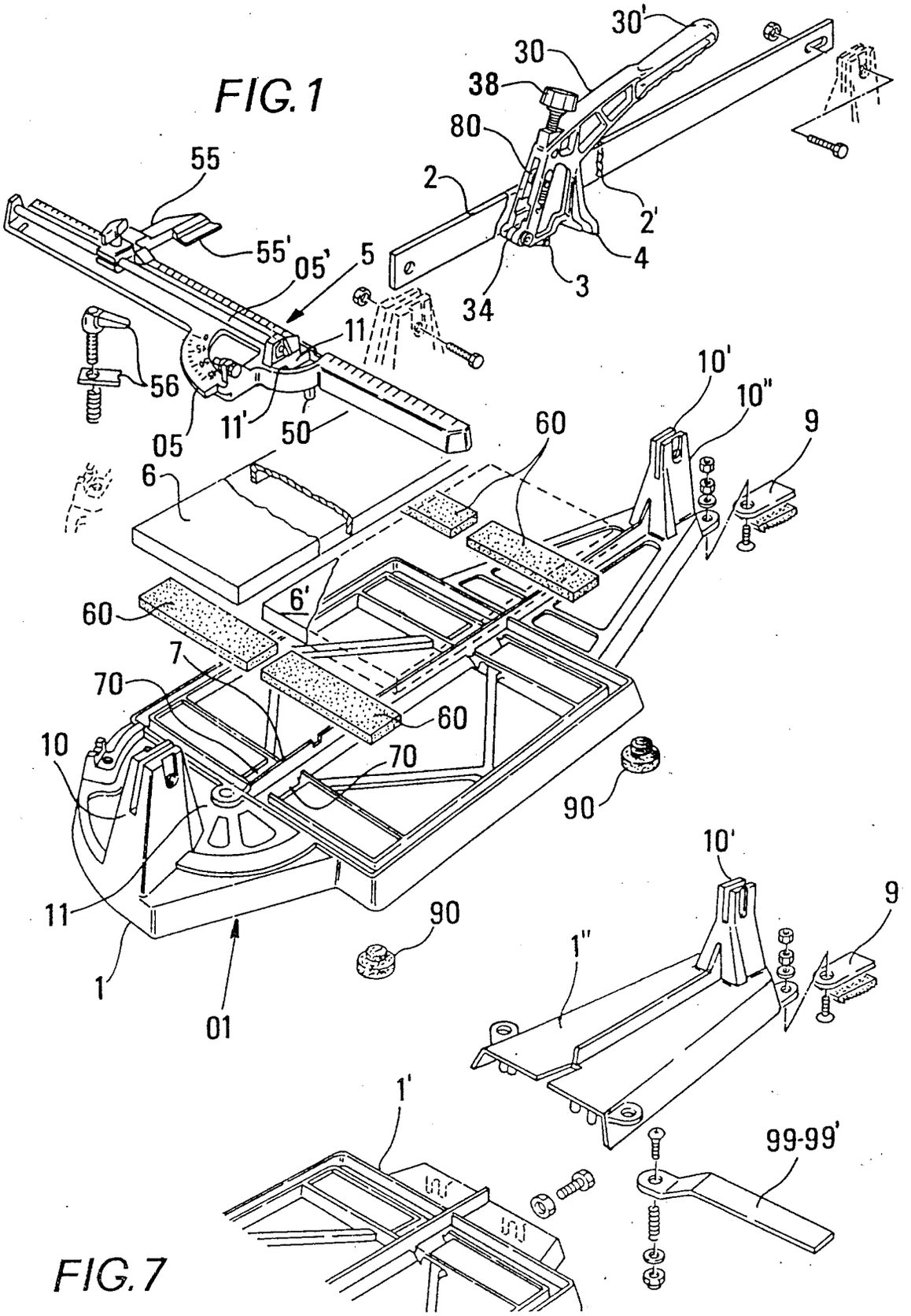

30'
30
38
80
2
2'
4
3
34
55
55'
05'
5
11
56
05
11'
50
10'
10"
9
60
6
6'
60
7
70
60
10
70
90
11
1
01
90
10'
9
1"
1'
99-99'

FIG.7

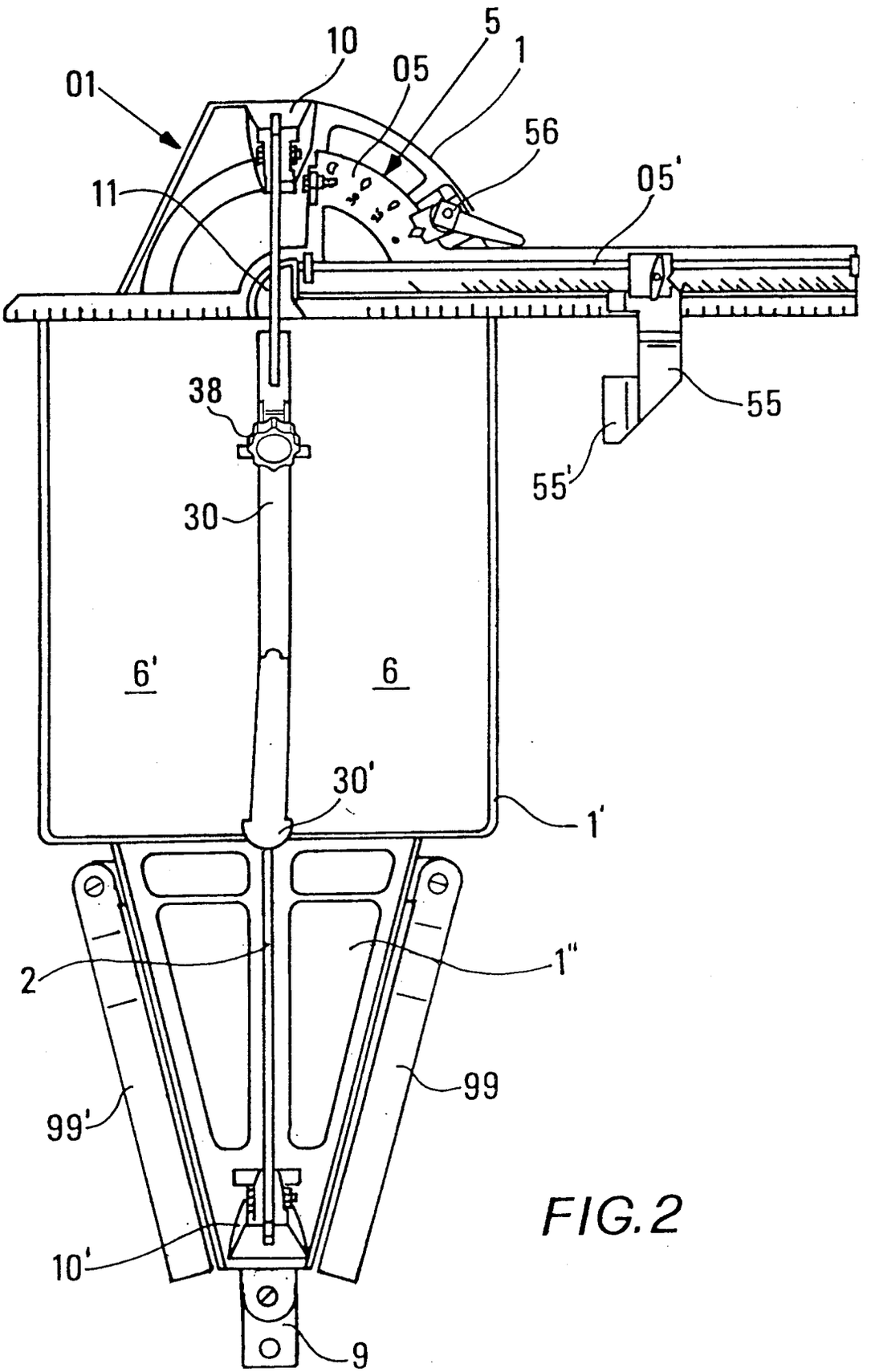


FIG.2

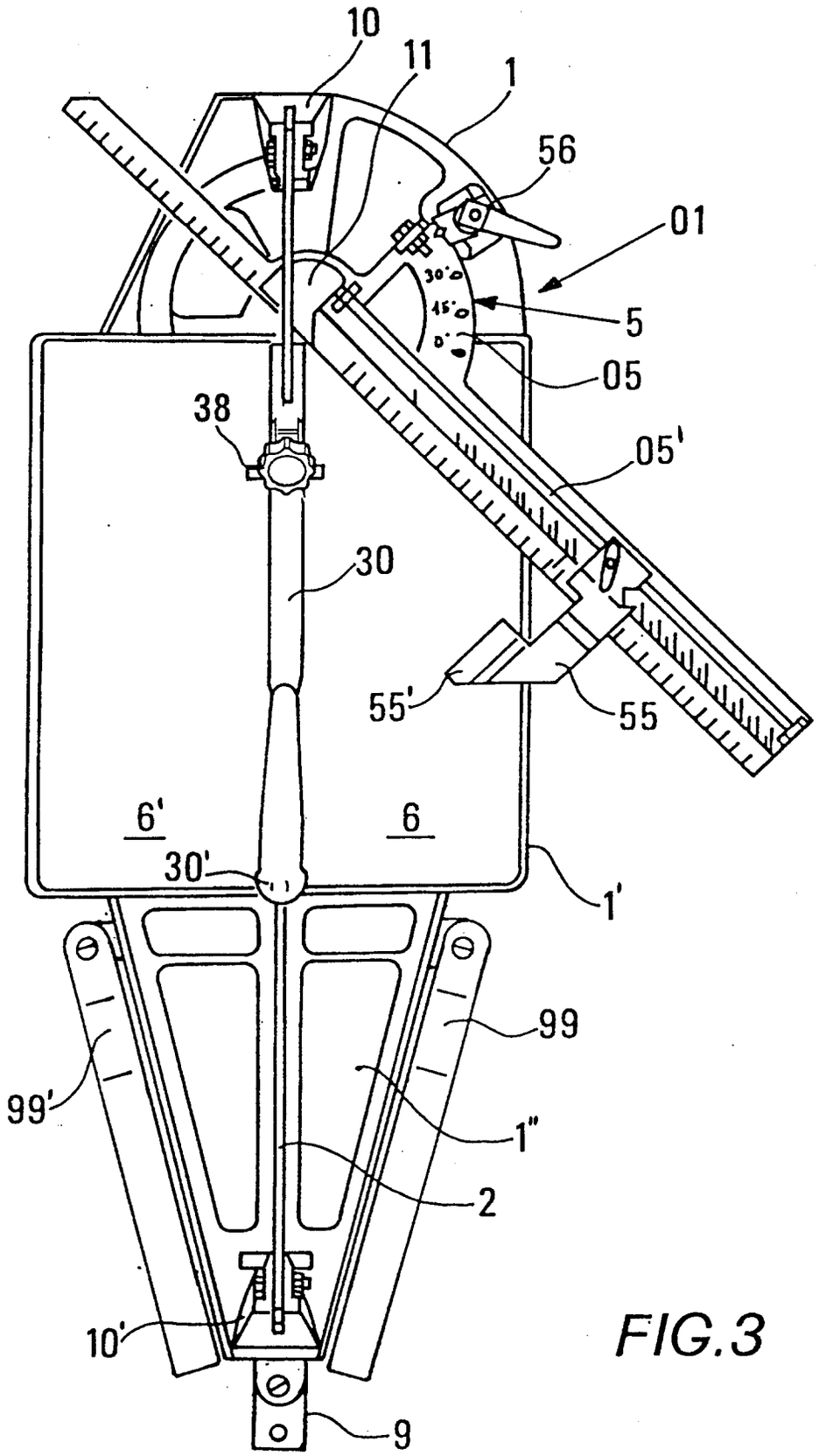


FIG.3

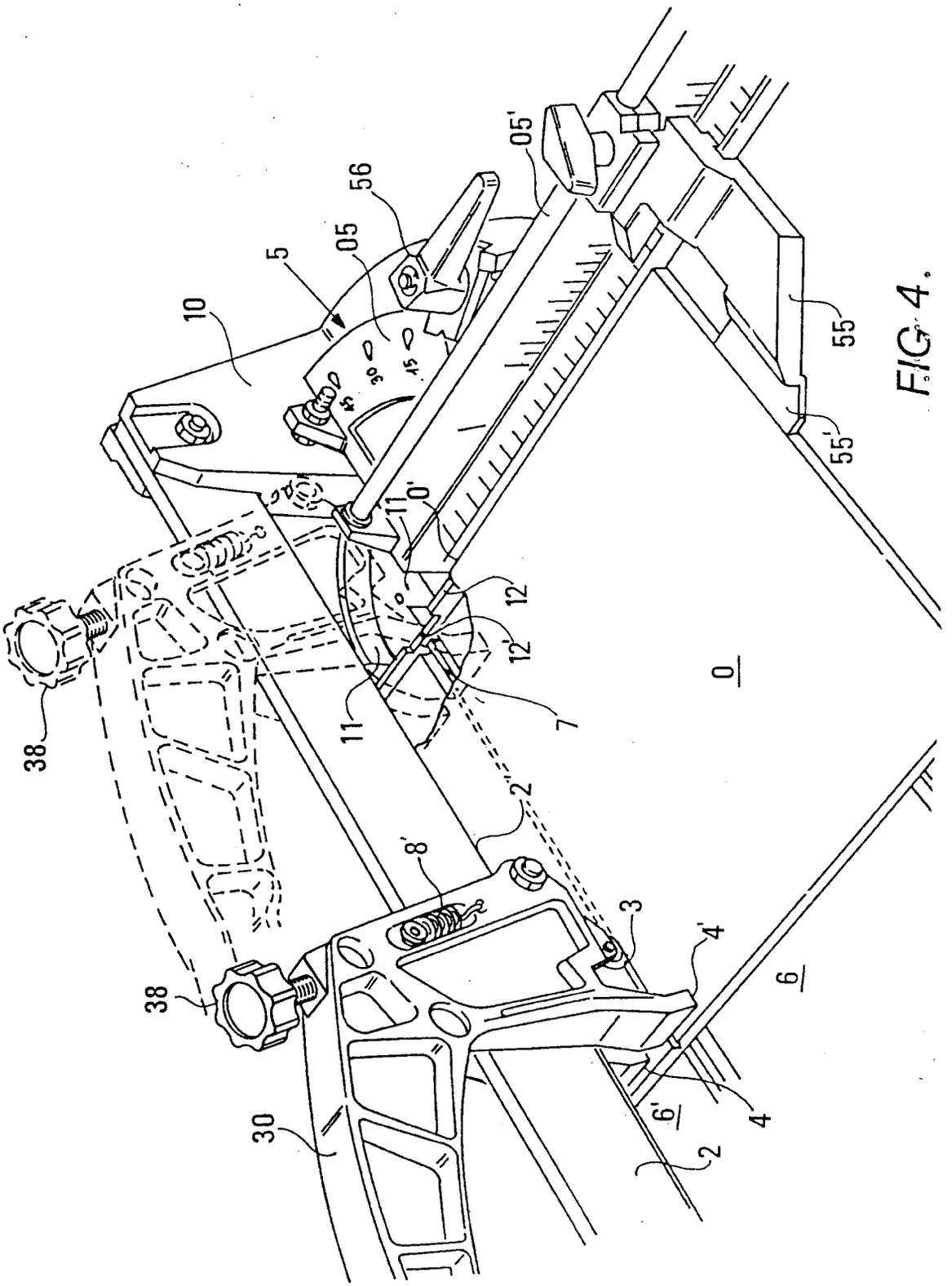


FIG 4.

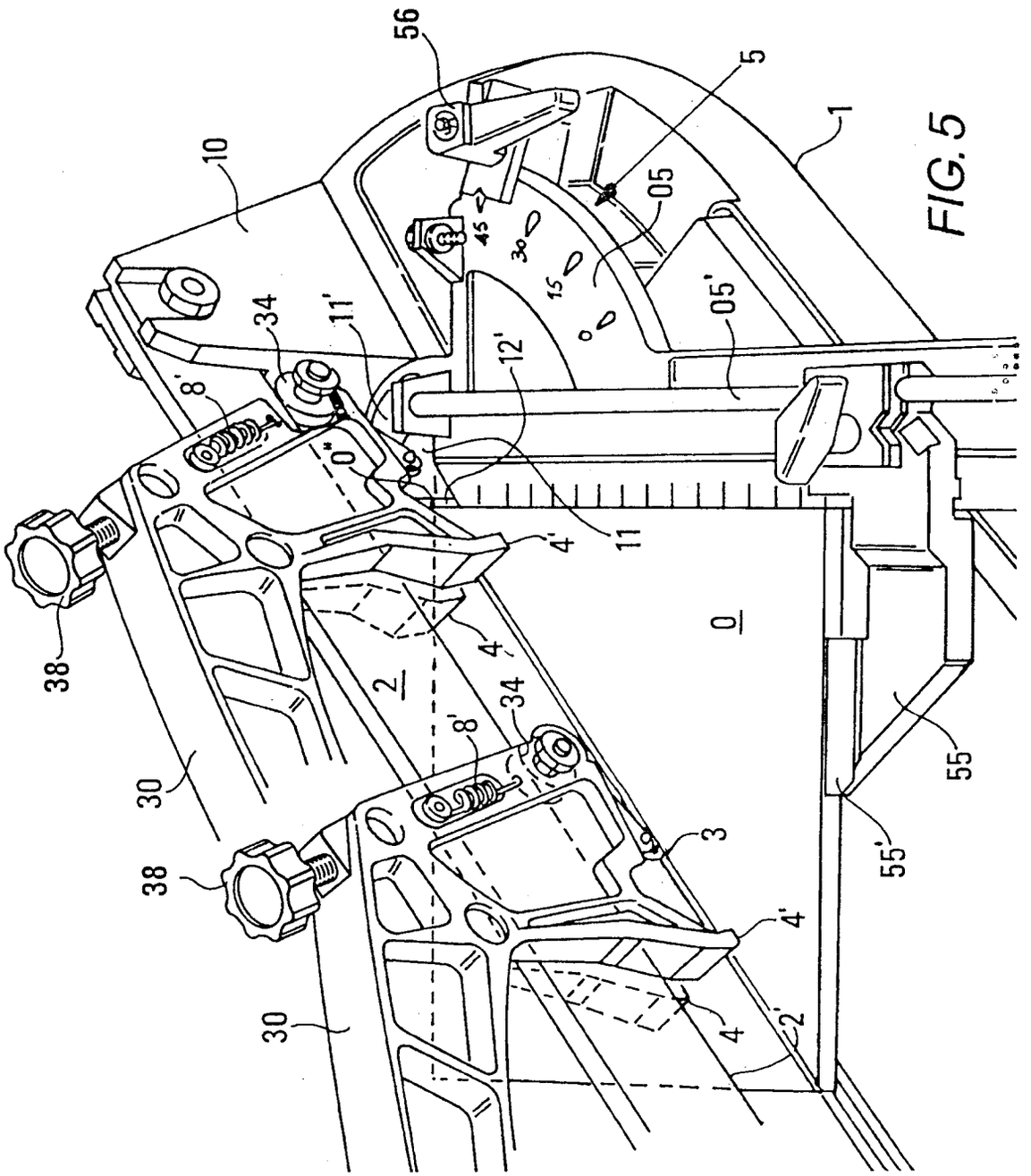


FIG. 5

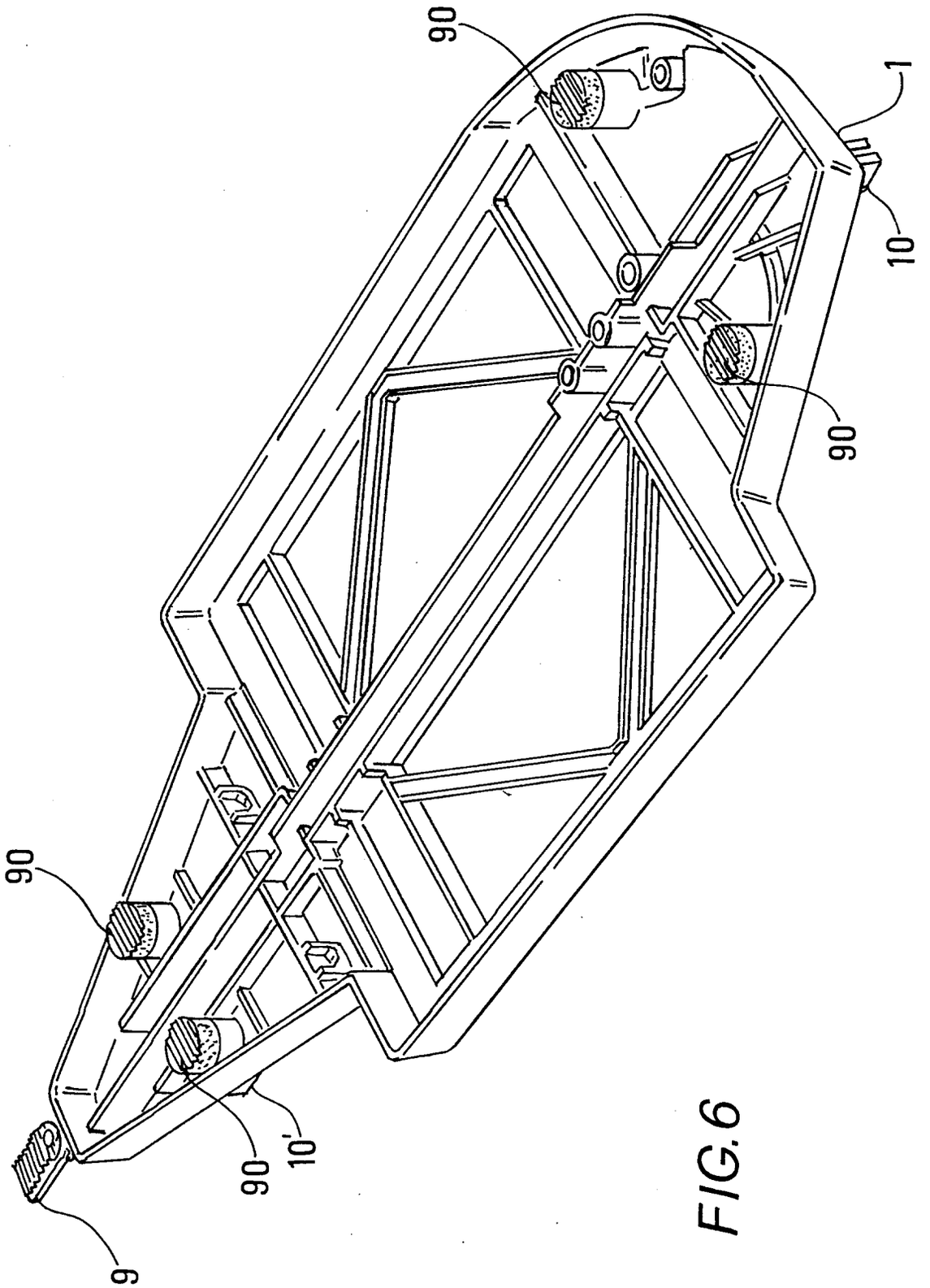


FIG.6

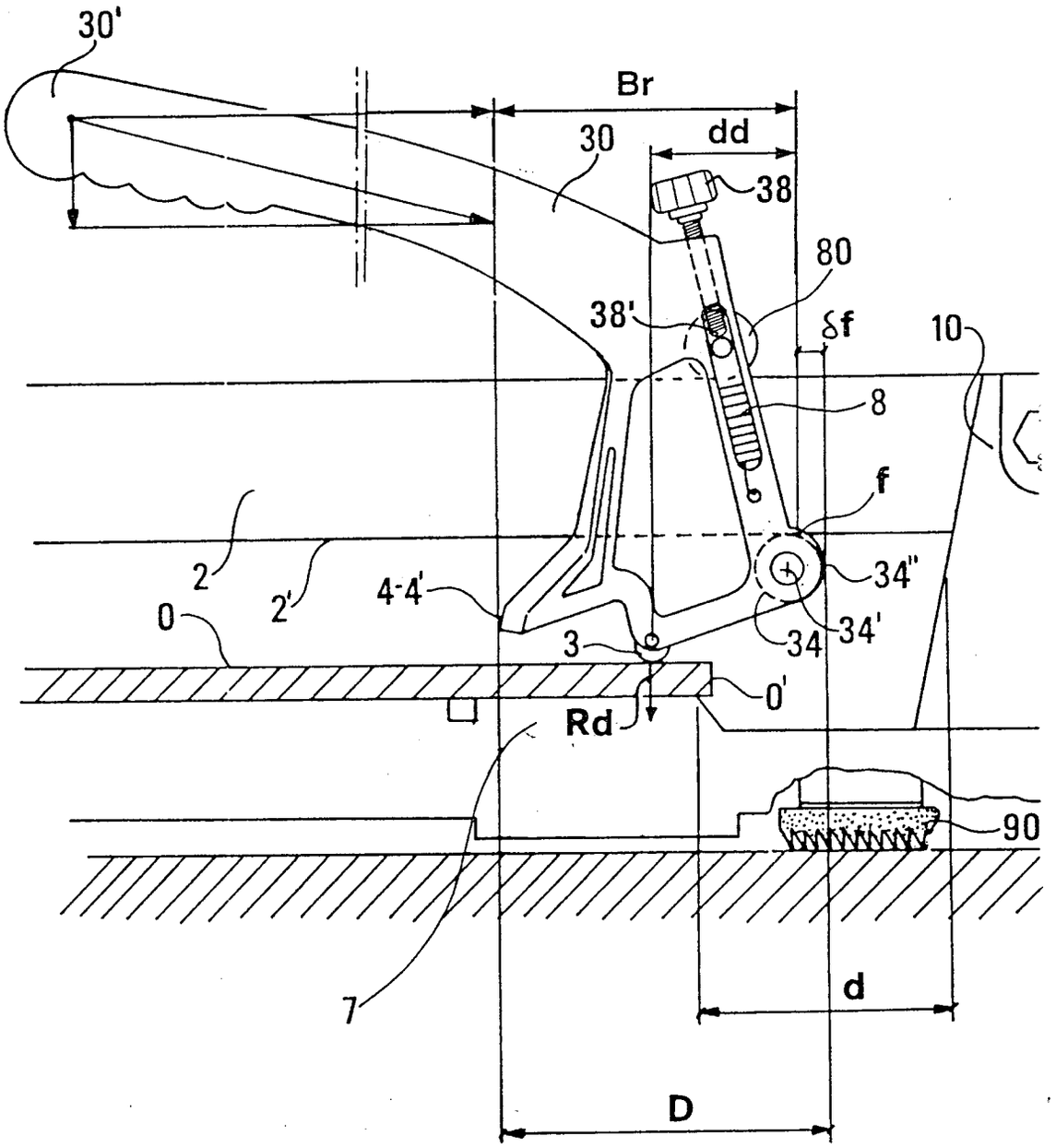


FIG. 8

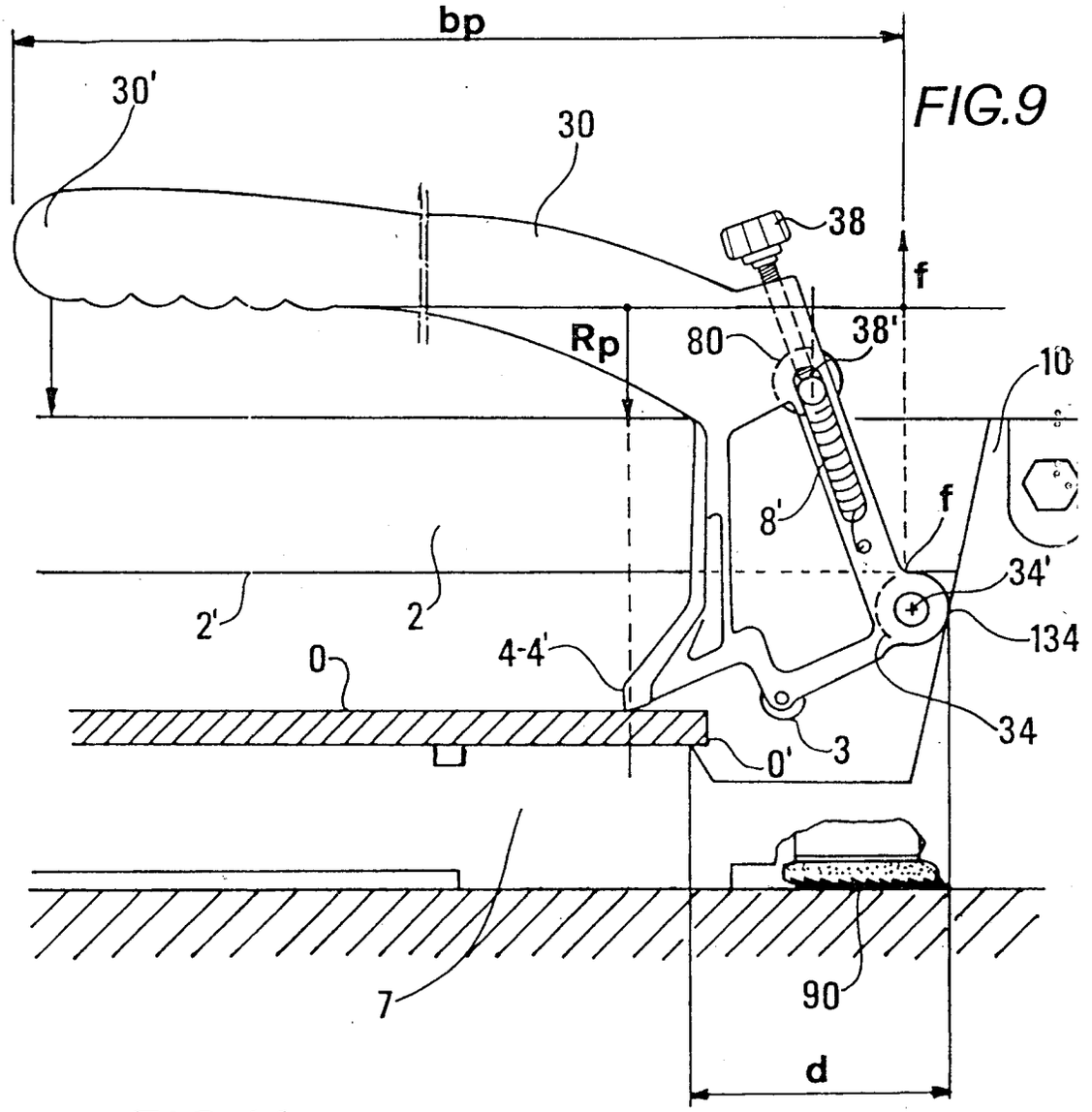
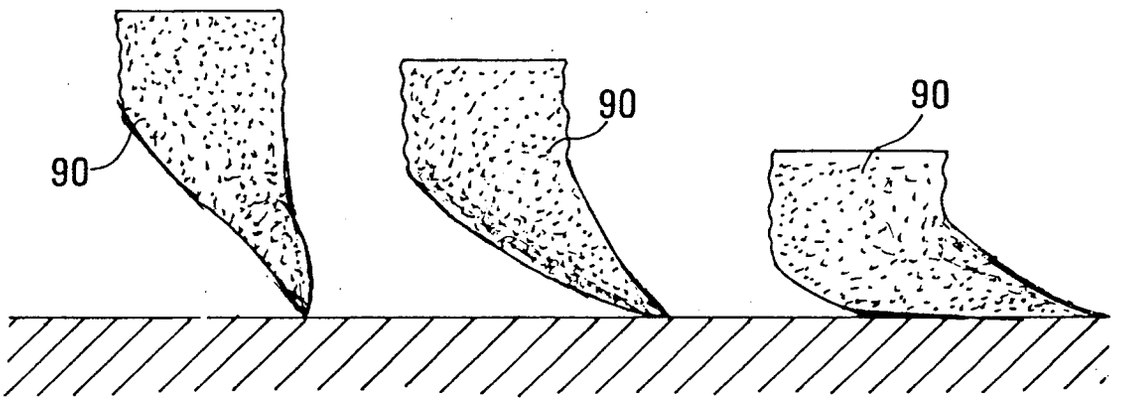


FIG.9

FIG.14



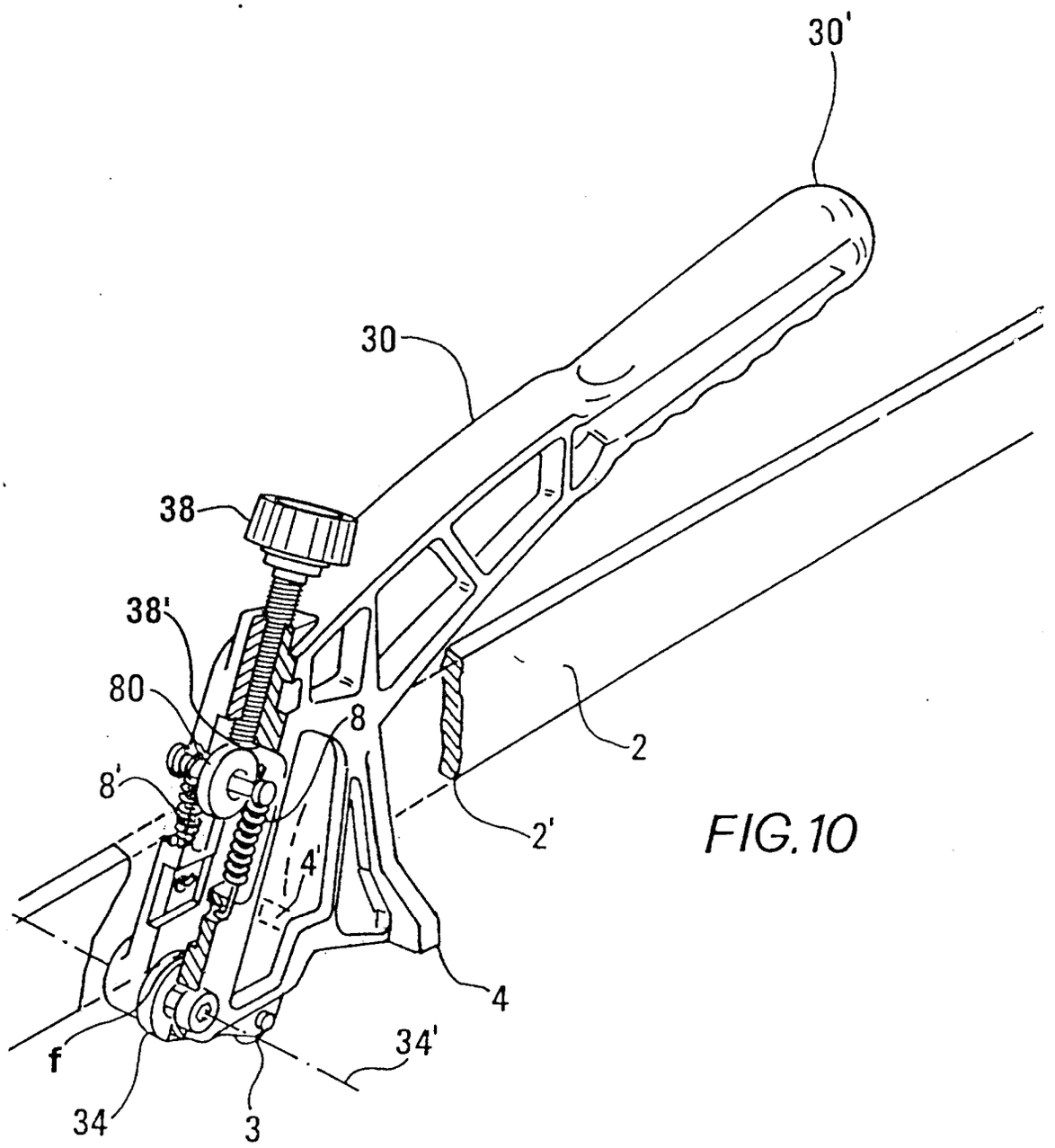


FIG. 10

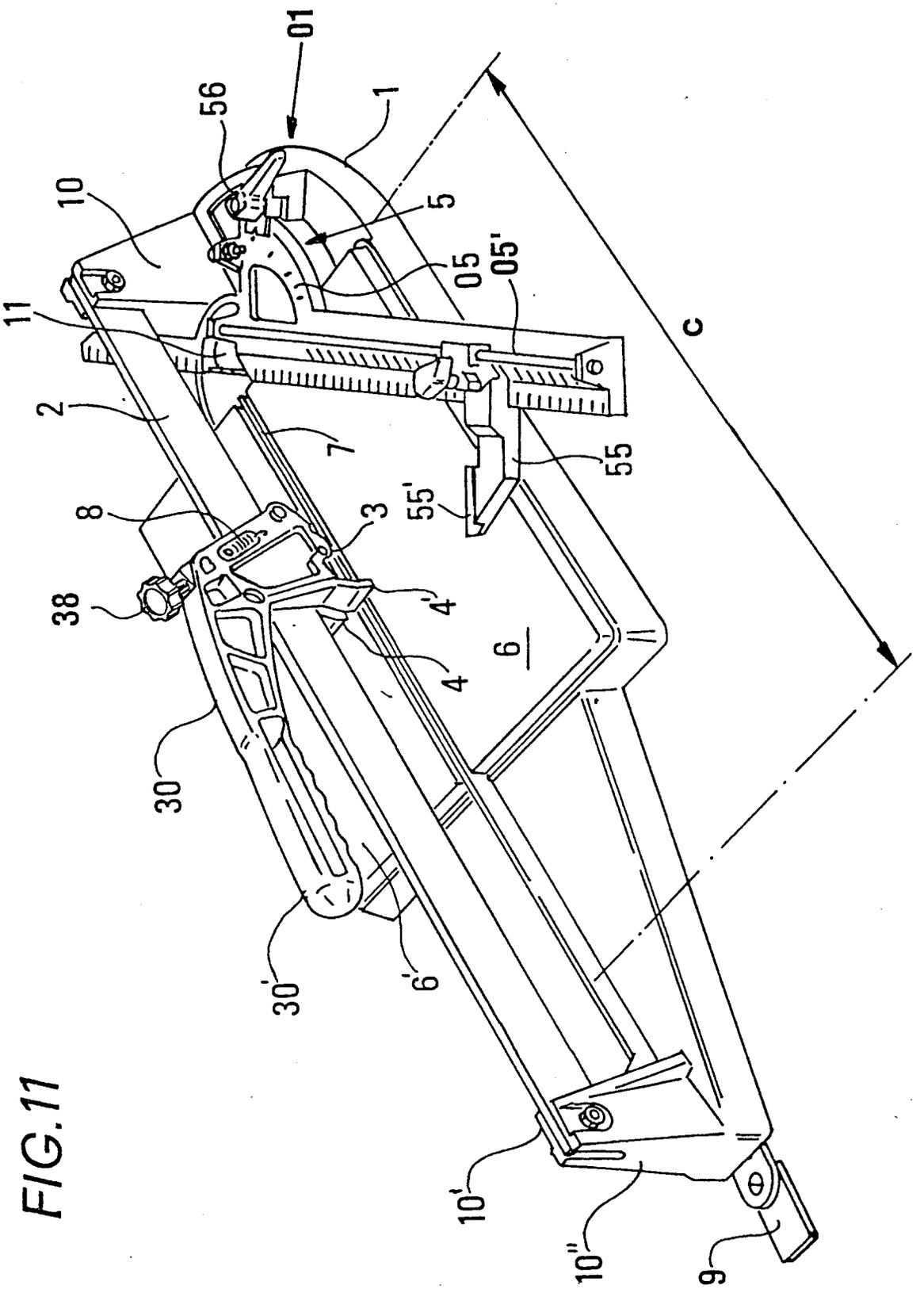


FIG.11

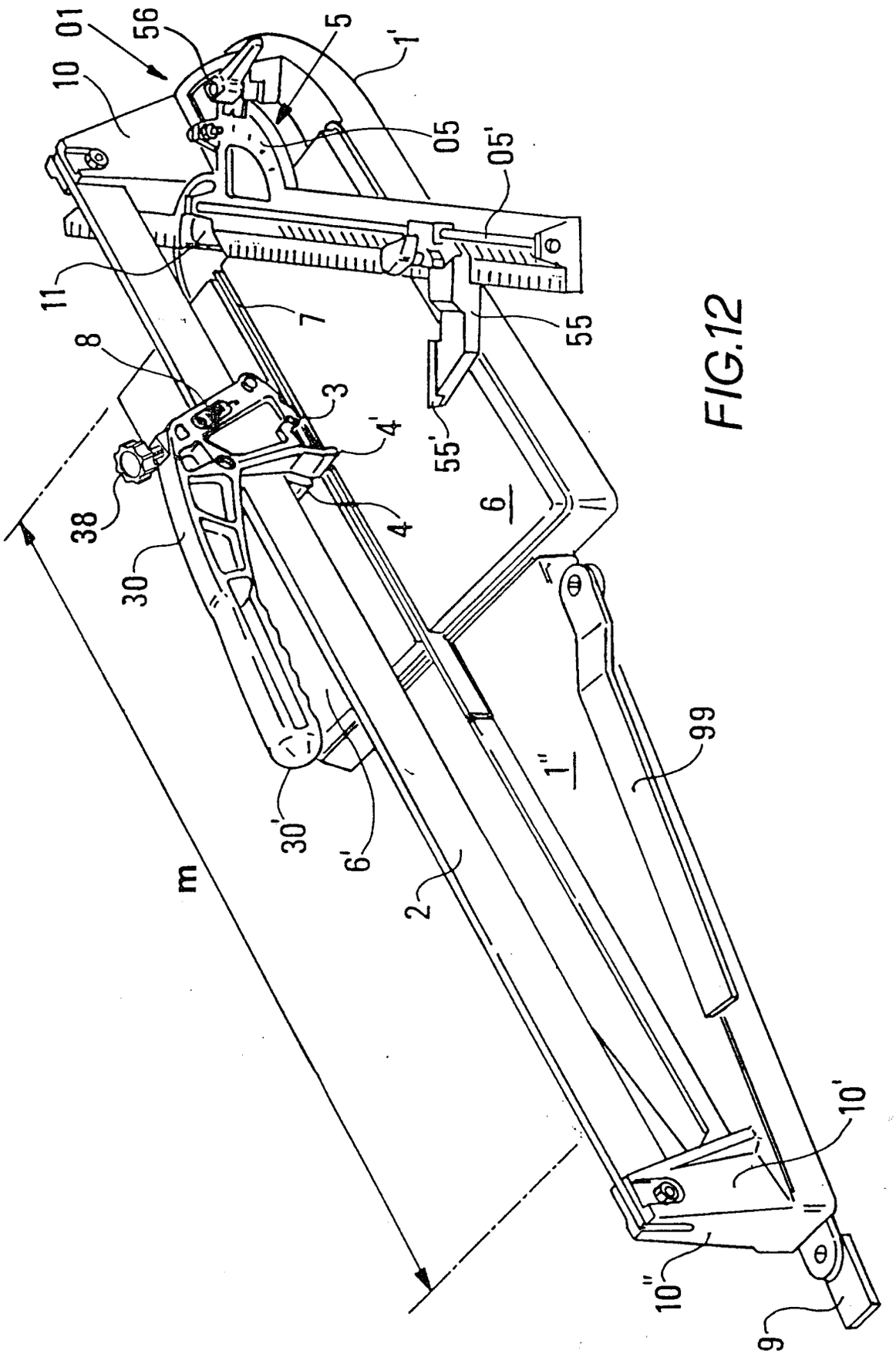


FIG.12

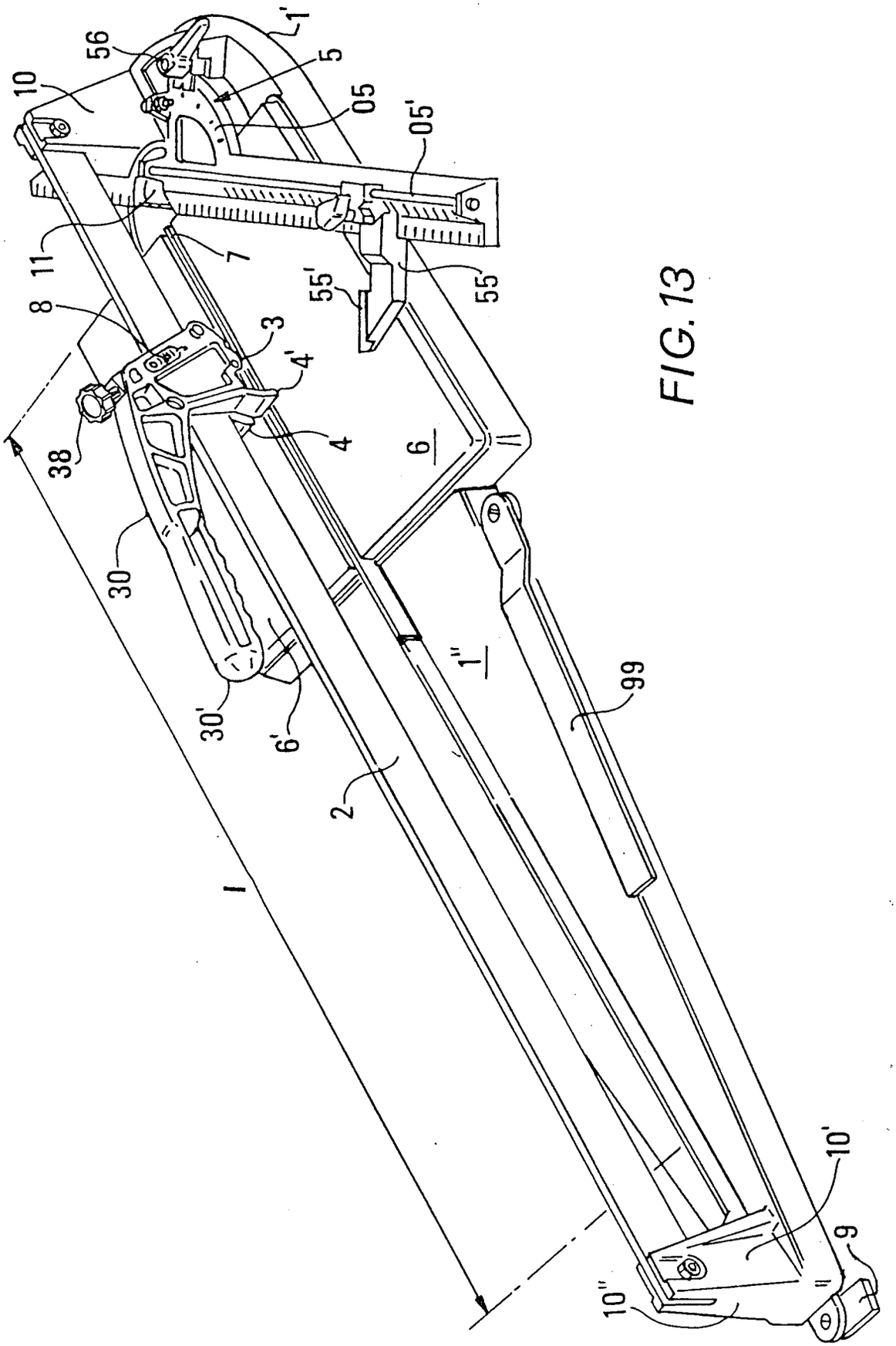


FIG. 13