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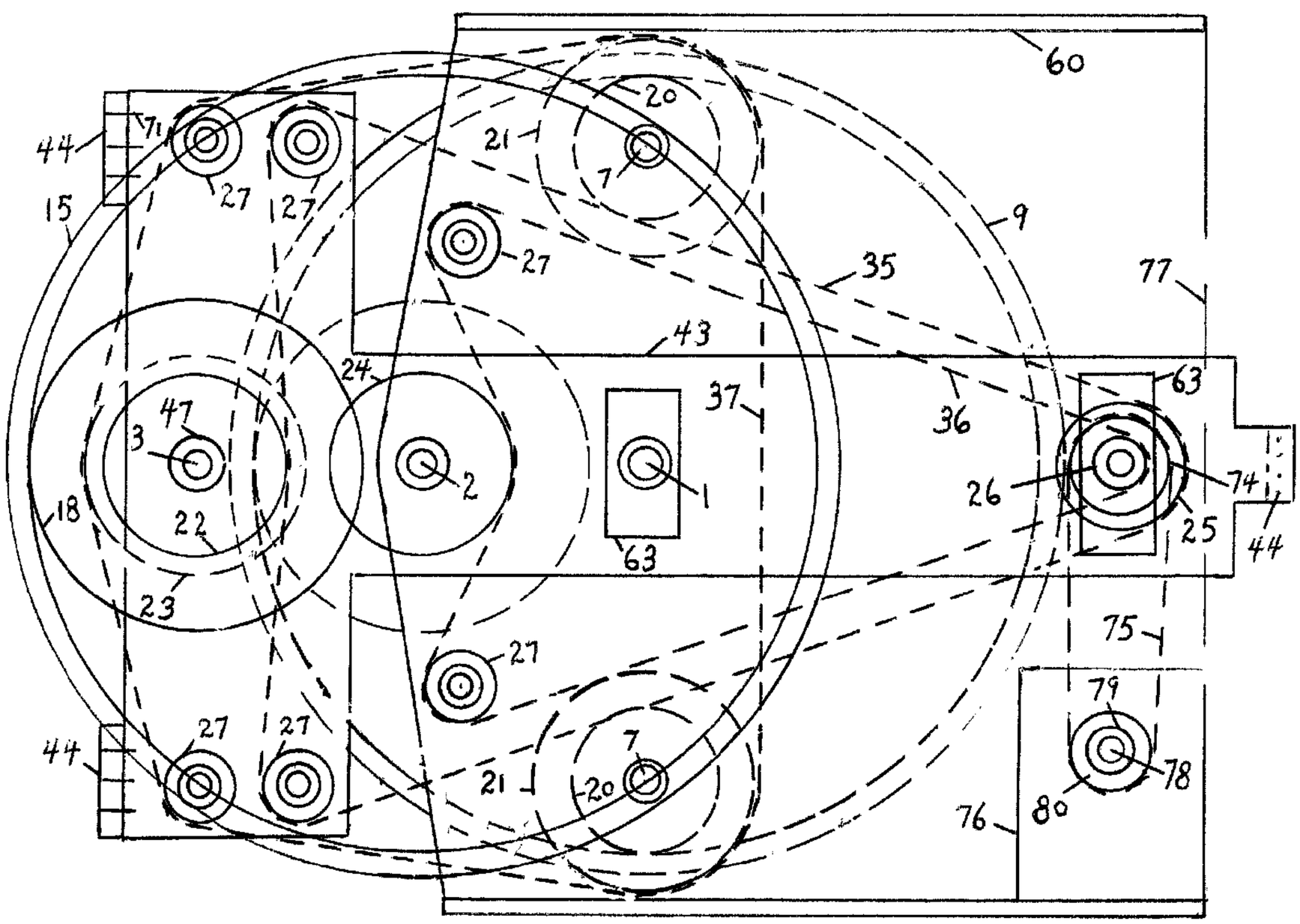

(57) Abrégé/Abstract:
Many previous efforts to construct a perpetual motion machine (weight motor) have met with failure. Indeed physicists and mechanical engineers have insisted that it is an impossible task. The following series of designs employs gears, sprockets and chains to allow a lever assembly to separate 'pro/sustaining force' from 'contra/work force', and to convert low value linear force into high value spin force. An 'eagle' variation of the motor employs a three-phase system comprised of nine main shafts, six relay shafts, and one work shaft. Feedback loops (3-2-1, 3-4- 2, and 3-1) prevent the pivoting shaft assembly from achieving equilibrium. Resistance deliberately imposed upon the 'contra' rims of 'lamb' sprockets forces wheels to seek the less resistant spin direction, causing the levered wheels to force spin in the rest of the motor. This motor can operate in any attitude, and in virtually any medium. Neither fuel nor even gravity is required; and no emission comes from it.

Thunderbird Infinite Motor **Abstract**

Many previous efforts to construct a perpetual motion machine (weight motor) have met with failure. Indeed physicists and mechanical engineers have insisted that it is an impossible task. The following series of designs employs gears, sprockets and chains to allow a lever assembly to separate 'pro/sustaining force' from 'contra/work force', and to convert low value linear force into high value spin force. An 'eagle' variation of the motor employs a three-phase system comprised of nine main shafts, six relay shafts, and one work shaft. Feedback loops (3-2-1, 3-4-2, and 3-1) prevent the pivoting shaft assembly from achieving equilibrium. Resistance deliberately imposed upon the 'contra' rims of 'lamb' sprockets forces wheels to seek the less resistant spin direction, causing the levered wheels to force spin in the rest of the motor.
This motor can operate in any attitude, and in virtually any medium. Neither fuel nor even gravity is required; and no emission comes from it.

Thunderbird Infinite Motor **Specification**

An 'eagle' variation of the motor employs a three phase system comprised of nine main shafts, six relay shafts, and one work shaft. The central main shaft, called a god shaft, supports a disc, which in turn supports two very large wheels—one attached to each side of it. Each wheel in this case is a large internal gear (but the wheel assembly might equally well be a very large sprocket which carries triple strand roller chain fitted tight to its periphery, with a single strand extending over each side.) A large spur gear engages each internal gear at its equatorial, and two smaller spur gears engage each internal gear—one at each polarity. The large spur gear is called an ox gear and rides on a fixed-place angel shaft—one on each side of the sun wheel disc; the smaller spur gears are called planet gears and ride on fixed-place planet shafts. Related to the angel shaft are two fixed-place relay shafts—one over it and one under it.

Also fixed to the matrix is a shepherd shaft, found outside the radius of the sun wheel, and placed on the opposite side of it as the angel shaft, but sharing the same equatorial. The shepherd shaft carries four sprockets, which receive work force from wheels on the opposite side of the god shaft, and reconciles the respective spin rates with different sized sprockets. The shepherd also carries a sending wheel to the end-user utility via a chain or belt.

The input handle of the lever is on the same side as the shepherd shaft, (and beyond the extent of the matrix wall and its tie elements) and the lever pivots about the angel shaft to move a 'life shaft' assembly at its far end. Also carried on the life end of the lever are four relay shafts—two over and two under, the angel shaft.

Also found on each angel shaft is an angel lamb sprocket near its mid-length, and a very large disc at its outer end. The disc supports a large internal 'lion' gear on its inner side. Found on the life shaft (which pivots about the angle shaft) is a large 'wolf' spur gear at each end, which engages the internal gear at the outer end of each angel shaft; and two life-comet sprockets; and two life-lamb sprockets. The life-comet sprockets send chain from the rim distal to the god shaft (its pro-rim), via relay wheels, to the planet comet sprockets (each found on a planet shaft) in a continuous loop. The life-lamb sprockets send chain from the rim proximal to the god shaft (its contra-rim), back around its respective relay sprockets, and across to the related life shepherd sprocket found on the shepherd shaft.

Each angel lamb sprocket sends chain from the rim proximal to the god shaft (its contra-rim), back around its respective relay sprockets, and across to its related angel shepherd sprocket.

Also on the shepherd shaft, near its mid-length, another sprocket, multiple sprocket, or sheave, sends chain or belting; or a gear sends rotational force, to a receiving wheel which produces some form of utility.

Other variations of the motor employ a moon sprocket (in lieu of the planet assemblies), which resides on the god shaft, between two sun wheels, and which relates via chain with a bird sprocket on the life shaft.

Thunderbird Infinite Motor Specification

T-bird Jet

The ~~Ap3x~~ motor variations are designed as eight general sets: the eagle set; the loon set; the swan set; the sweagle set, the owl set; the lark set; the sparrow set; and the dove set. In every case there are at least three main shafts on the same equatorial plane (when in stasis): the god shaft, the angel shaft, and the life shaft. On the god shaft is at least one sun wheel (and in the owl, lark and sparrow designs, a moon wheel); on the angel shaft are ox wheel/s, lion wheel/s, and sometimes a lamb sprocket; on the life shaft are wolf wheels, lamb wheels (and in the owl, lark and sparrow designs, a bird wheel). In essence, the ox eats the sun and supports the lion and lamb; the wolf eats the lion and supports the lamb and bird (or comet). The bird flies to the moon, or the life comet flies to the planet comet; and the lambs return to the shepherd: feedback loops exist through several interconnecting sub-systems.

The sets may be defined roughly according to the relative positions of their sun wheels: the sun wheel can be found in the mid-section of the motor in the 'eagle', in the 'loon', in the 'swan', in the sweagle, in the 'owl' and in the 'dove'. Sun wheels are found on the sides of the motor in the 'lark' and in the 'sparrow'. In the eagle, loon, swan, sweagle and dove, comet wheels provide the same feedback function as the moon and bird. The moon sprocket extends beyond the distance of the angel shaft/s to the god shaft in the lark and owl designs; while the radius of the moon sprocket in less than the distance from the angel shaft to the god shaft in the sparrow design. The swan, sweagle and loon have retro features about them, as explained below. A class one lever, and/or a class two lever may be used in every design variation.

An 'eagle' variation of the motor employs a three phase system comprised of as many as nine main shafts, six relay shafts, and one work shaft.

EAGLE

In the motor illustrated in Figures 1 and 2, the central main shaft 1 (called a god shaft) supports a disc 10 through a bushing 53. The god shaft 1 is supported through bearings 45 to matrix walls 60 at each end. The disc 10 has attached to it, very large internal gears 9 (called sun wheels)—one on each side. Each wheel in this case is a large internal gear 9 (but the sun wheel might equally well be a very large sprocket 8 which carries triple strand roller chain 38 fitted tight to its periphery, with a single strand extending over each side.) A large spur gear 13 (called an ox wheel) engages each internal gear 9 at its equatorial, and two smaller spur gears 20 (called planet spur gears) engage each internal gear—one at each polarity. The large spur gear 13 is called an ox gear and rides on a fixed-place angel shaft 2—one on each side of the sun wheel disc; the smaller spur gears 20 are called planet gears and ride on fixed-place sun-planet shafts 7 via bearings 50. All fixed place shafts key into two or more matrix walls 60. Related to the angel shaft 2 are two fixed-place relay shafts27—one over it and one under it.

Also fixed to the matrix wall is a shepherd shaft 4, found outside the radius of the sun wheel, and placed on the side of it opposite the angel shaft (called the posterior side) but sharing the same equatorial. A lever 43 supports a life shaft 3, which (while in stasis) is on the same equatorial as the god shaft, the angel shaft, and the shepherd shaft. In Figure 1, two class two lever arms 43 are used, and are joined to one another by a stiffening brace 44.

In Figure 2, class one lever arms 43 are employed and extend beyond the reach of the motor matrix walls 60 via an access window 77. Each lever arm 43 carries a cross brace 61 which supports relay wheels 27 over and under the life shaft 3. The life shaft 3, wheel assembly includes life comet sprockets 23 which cycle chain 37 to planet comet sprockets 21 which reside on the sun-planet shaft 7 without the aid of relay shafts 27. Shaft avoidance gaps 63 are cut into the long lever arm 43 in order to allow the lever to fulcrum on the angel shaft 2 without touching the god shaft 1 or the shepherd shaft 4.
In Figure 3, two relay wheels 27 exist over the life shaft 3, and two are under it. In this embodiment, life comet sprockets 23 cycle chain from their pro rims 72 (which exist distal to the angel shafts) to the planet comet sprockets 21 via relay sprockets 27. Also on the life shaft are life lamb sprockets 22 which in this case are the same size as the life comet sprockets 23. The life lamb sprockets cycle chain 35 from their contra rims 73 (which exist proximal to the angel shafts) to shepherd sprockets via relay sprockets 27. An angel lamb sprocket 24 on each angle shaft 2 cycles chain 36 from its contra rim 73.
For the sake of simplicity, the lion wheel has not been introduced until Figure 4.
In Figure 4, an embodiment similar to that described in Figure 3 shows a very large internal gear 15 (called a lion wheel) which is also a part of each angel shaft wheel assembly. A spur gear 18 (called a wolf wheel) engages the lion wheel 15 on its pro/distal side. Pro/comet chain 37 cycles from the life comets to the planet comets; and contra chain, both life lamb chain 35, and angel lamb chain 36, cycle to the life shepherd sprockets 25 and the angel shepherd sprockets 26. The shepherd shaft 4 carries four sprockets, which receive/send work force from wheels on the anterior side of the god shaft 1, and reconciles the respective spin rates with different sized sprockets. The shepherd also carries a sending wheel 74 near its mid-length, another sprocket, multiple sprocket, or sheave, which sends chain or belting 75; or a gear sends rotational force, to/from a receiving wheel which produces some form of utility 76.
In Figure 5, we see a top view of the embodiment shown in Figure 4, before any chain is installed. The fulcrum of the lever does not bear directly on the angel shafts, but instead on a shaft sleeve 33 that is attached to the adjoining matrix wall 60 by a plate 66 and fastening bolts or rivets 65. We also see how planet shafts 7 are superimposed above the god shaft 1, and how the high planet gears 20 are slightly superimposed over part of the ox gears 13, which are slightly beneath them.
In Figure 6, we see a top view of the embodiment in Figure 5 with chains applied: life comet 23 chains 37 cycling to planet comets 21 via relay wheels 27; life lamb 22 chains 35 cycling to life shepherd sprockets 25; and angel lamb 24 chains 36 cycling to angel shepherd sprockets 26.
In Figure 7, we see a top view of an embodiment which is similar to that which is shown in Figure 6, but having additional supports posts 57 for the outer ends of the angel shafts 2.
Figure 8 is a top view of a lever set 42 which may be used to induce a double-ended motor: The fulcrum is the god shaft 1, and in order to move the life shafts 3 without touching the angel shafts 2 cutouts 63 must exist in the lever arms at the angel shaft sites. Because the arc of the long lever 42 is greater than the arc of the effected life shafts 3, short arms 41 with fixed distances from the angel shaft 2 to the life shaft 3 must be installed, and bearing travel slots 40 must exist in the long levers 42 to accommodate the differential in distances as the lever is swung. The long lever pivots on the god shaft 1 via

bearings 45, and moves the life shafts 3 via bearings 48. The short arms connect the angel shaft 2 through bearings 46, to the life shafts 3 through bearings 47. Other wheel members of each shaft assembly 104 (not shown, owing to variable configurations) are flanked by the long levers 42, and the long lever are joined and stabilized by stiffening braces 44.

Figure 9 a top view of a double scissors method of levering a double-ended motor: The fulcrum of the main lever 91 is the god shaft 1 but in this case bearing travel slots 40 are not needed as they are required in Figure 8; and a more efficient leverage ratio is achieved. Each long lever 91 connects to flanking levers 92 via pivot blocks 101. Each pivot block 101 has two pinholes in it, one over and one under. One pinhole receives a pin 100 from the long lever 91 while the other pinhole receives a pin 100 from the flanking lever 92. The long lever has a pin 100 high at one end and low at the other end of the lever, each equidistant from the life shaft 3 as the other. The pin block 101 accommodates the change in distances of the main lever 91 from the life shafts 3. The main lever must have cutouts 63 in it around both angel shafts 2 and both life shafts 3, while each flanking lever has a cutout at the god shaft 1, and at one each of the angel shaft 2 and the life shaft 3—each flanking shaft of the double scissors configuration influencing the life shaft 3 which is farthest from its respective pin block 101.

Figure 10 is a side view of the double scissors main lever 91, its intermediate pin blocks101, and the two flanking levers 92. Each pin block 101 is sandwiched between the main lever 91 and its flanking lever 92 at site 103, and has two pinholes 102. Pivots pins fit into each of the pinholes 102 of each pin block, but fit into only one pinhole at each end of the levers. Cutouts 63 are indicated in all the lever members at the respective locations, and bearing sites—god shaft bearing 45, angel shaft bearing 46, and life shaft bearing 47—at their appropriate locations.

Figure 11 is an end view of a main long lever 91 and one of its flanking levers 92 in the double scissors lever configuration indicating the relative positions of the connecting/pivot pins 100 from main lever 91 to block 101, and from block 101 to flanking lever 92.

Figure 12 is an elevation of a simplified single-ended embodiment which has only one feedback loop—the chain 37 which cycles directly from the life comet sprocket 23 to the planet comet sprockets 21 and no outside source of resistance, whose life comet sprocket 23 is the same radius as the wolf wheel 17/18. It also indicates how the lever 43 may be installed in two parts 68 which are held together by bolts 71, and shows a seam in it 69. Further, it indicates that the sun wheel and lion wheel might be either internal gears 9 and 15 respectively, or sprockets 8 and 14 respectively, surrounded by multi-strand chain (not shown), and that the ox wheel and the wolf wheel might be spur gears 13 and 18 respectively, or sprockets 12 and 17 respectively.

Figure 13 is an elevation of an embodiment similar to that in Figure11, except that it includes a resistance/work source called a life shepherd sprocket 25, which acts on the contra-rim 73 of the life lamb sprocket 22 via relay wheels 27 [The life lamb sprocket 22 also happens to have the same radius as the wolf wheel 17 or 18.] The shepherd shaft 4 carries life shepherd sprockets 25, and a shepherd to work sprocket 74 which cycles chain 75 to a resistance/work source 76 which resides on a work receiving shaft 78.

Figure 14 is an elevation of a double-ended motor carrying a resistance wheel 25 above, which is unattached to, and beyond the radius of, the sun wheel 8/9. It also has a chain 35 cycling from the contra-rim of the life lamb via relay sprockets, to that resistance source 76. Relay wheels 27 exist on cross braces 61 which serve to direct chain 37 to life comets; and to direct chain 37 to resistance wheels 25, without impediment. Because a non-scissors long lever 42 is used, a travel slot 40 must be designed into it beside each life shaft bearing 48; and cutouts 63 must also exist in the lever arm design.
Figure 15 is an elevation of a double-ended embodiment which is similar to that which is shown in Figure 14, except that a support matrix wall 60 for fixed-place shafts is revealed, and a 'butterfly' configuration of cross brace 62 for relay wheels exists at the lever ends. This embodiment must use fixed distance short arms 41 from the angel shafts 2 to the life shafts 3. The long levers 42 pivot directly around the god shaft 1 via bearings 45.
Figure 16 is an elevation of the embodiment shown in Figure 15 indicating that the long levers pivot around the god shaft 1 via a sleeve 33 which attaches to an adjacent matrix wall (not shown), and which protects the god shaft from undue wear. In this case, the life lamb sprockets as larger, providing more spin per sun wheel revolution than existed in the embodiment shown in figure 15.
Figure 17 is an elevation of an embodiment which is similar to that shown in Figure 16, but which also carries relay sprockets 27 over and under the angel shaft 2 that is aligned with an angel lamb sprocket 24 on each angel shaft, and an angel shepherd sprocket 26 on the shepherd shaft 4 respectively. This configuration allows chain to be sent from the contra-rim 73 of each angel lamb 24 to the shepherd shaft 4, contributing to the work force, and reconciling with rotational force from the life shaft assembly as there are two shepherd wheel sizes, and providing a further feedback loop.

LOON

Figure 18 is a top view of an embodiment (called 'loon simplex') in which the god shaft is supported by posts 55 via bearings 45, the angel shafts are supported by posts 57 via bearings 46, and the yoke shaft is supported by posts 58 via bearings 49. A triple strand chain 38 surrounds a very large sun sprocket 8, and extends to a set of triple sprockets 32 which are positioned on a yoke shaft 5 posterior to the god shaft 1. The overhanging chain strands are engaged on each side of the sun sprocket 8 anterior to the god shaft 1. This variation has no artificial resistance source. A feedback loop exists between the life relay sprocket 82 and the yoke relay sprocket 83. In this case, the lion wheel 14 and the wolf wheel 17 are also sprockets. Other elements of the loon simplex design are similar to those described in the simplest of 'eagle series' designs.
Figure 19 is a top view of the 'loon complex' design before chains are applied to it. It also indicates where subsequent elevations of sections of the motor exist in the overall design variation. This embodiment includes a shepherd shaft 4 posterior to the yoke shaft 5, and shepherd shafts 4 over and under the angel shaft 2. Each shepherd shaft carries two sizes of sprocket: a smaller angel shepherd sprocket 26 and a larger life shepherd sprocket 24, in order to accommodate the different chain speeds. A shepherd-to-work sprocket 74 cycles chain 75 to a resistance source which lies beneath the visible elements.
Figure 20 is a top view of the embodiment shown in Figure 19 with chains in place.
Figure 21 is an elevation of those main elements of the loon complex which exist within

the confines of the lever arms i.e. sections iii, iv, v, vi, and x, but not section vii, nor viii. The god shaft 1 is supported by a posts 55; the angel shafts 2 and two shepherd shafts are supported by posts 57; the yoke shafts 5 are supported by posts 58; and the posterior shepherd shaft 4 is supported by posts 59. The post sections are tied together by bolts 71, and the post group is tied together by flooring 67.

Figure 22 is an elevation of the embodiment showing section iii, indicating the life shaft 3 and the angel shaft 2 and adjacent shepherd shafts 4 anterior of the god shaft 1; and the yoke shaft 5 and the back shepherd shaft 4 posterior of the god shaft. The sending sprocket 74 located on the back shepherd shaft 4 cycles chain 75 to a work receiving wheel 80 which serves some form of utility 76.

Figure 23 is an elevation of the embodiment showing section iii, in which the sending wheel on the shepherd shaft is a gear 85 and the receiving wheel is a pinion 86.

Figure 24 is an elevation of section iii in which the shepherd shaft 4 is also the final receiving shaft 78, and the shepherd-worker wheel 87 is also the end user.

Figure 25 is an elevation of the 'loon complex' embodiment showing section iv, indicating the cycle of the chain 36 from the angel lamb sprocket 24 around three angel shepherd sprockets.

Figure 26 is an elevation of the embodiment showing section v, indicating the cycling of the chain 35 from the life lamb sprocket 24 around three life shepherd sprockets 25.

Figure 27 is an elevation of the embodiment showing section vi, indicating the cycling of chain 84 around the life relay sprocket 82 and the yoke relay sprocket 83.

Figure 28 is an elevation of the embodiment showing section vii, which is the long lever 43 which pivots on the angel shaft 2 via bearing 46.

Figure 29 is an elevation of the embodiment showing section viii, indicating a lion wheel which might be an internal gear 15, but in this case is a large sprocket 14, which is engaged by a wolf sprocket 17 distal to the god shaft 1.

Figure 30 is an elevation of the embodiment showing section x, the four posts which support the angel shaft 2 and two of the shepherd shafts 4: post 57; post 55 supporting the god shaft 1; post 58 supporting the yoke shaft 5; and post 59 supporting the posterior shepherd shaft 4.

Figure 31 is an elevation in section iii of a 'loon complex' embodiment, in which the receiving shepherd assembly is forward/anterior of the life shaft assembly instead of being retro/posterior of it, and only the yoke elements remain posterior to the god shaft 1.

Figure 32 is a top view of the embodiment shown in Figure 31,

GAP: no Figure 33!

SWAN

Figure 34 is an X-ray elevation of an embodiment called the 'swan' (or 'reflux owl'), in which the sun sprocket 8 remains in the middle of the design, but the life shafts 3—one on each side of the sun wheel—are placed nearer the god shaft 1 than is the angel shaft 2. [This design permits a resistance source to influence the contra rim of the life lamb , but does not easily allow a contra rim on the angel shaft assembly to reconcile on a shepherd assembly with a life lamb 22. This variation also carries single unit shepherd shafts 4, which are placed beyond the radius of the sun wheel and extend resistance to life lambs on both sides of the single sun wheel.] (Note that in this embodiment the life shaft 3 occupies the same lateral line as the god shaft 1. Note also that in this case, the lion wheel

14 happens to be wider than the sun wheel 8.) In this embodiment one of the shepherd sprockets 25/27 also serves as a worker wheel 87. The feedback loop in this embodiment is in the form of chain 37 which cycles from the life comet 22 to the planet comet 21 (as with the EAGLE). The planet sprockets 19 on the planet shafts 7 engage the lapping strand of chain from the sun sprocket 8.
Figure 35 is an X-ray elevation of a loon embodiment, in which a separate shaft 78 assembly 80 serves as the work/utility site. Because no angel lamb cycles chain in the swan configurations, life lambs and angel lambs do not together need shepherding per se, and common relay sprockets 27 serve to cycle chain 35 to the work receiving sprocket 80 just as well.
Figure 36 is an X-ray top view of the embodiment shown in Figure 34 before chain is applied to it. Note that two lever arms 43 exist on each side of the sun sprocket 8, and inboard of the matrix walls 60 of the motor. Note also that the god shaft 1 reaches only as far as the first set of matrix walls 60 and that the lever arms 43 control the life shafts 3 on the line extending from the god shaft 1.

SWEAGLE
Figure 37 is an elevation of an embodiment in part, which shows a butterfly cross-brace 62 array. The butterfly serves also as a scissors arm of a single scissors system: it pivots anterior to the life shaft via a pivot pin 100 according to the swing of a class one lever 91. The butterfly brace controls the arcing of opposable wolf wheels A, and their respective relay shafts 6.
Figure 38 is a fuller representation of the embodiment displayed in Figure 37, showing chain vectors, including life lamb chains 35, which cycle to work receiving sprockets 80 at both the anterior utility 97 and posterior utility 98 of the motor system. Also, while the life comet 23 which is more distal to the god shaft1 cycles chain 37 to free planet comets 94 found on free planet shafts 93, the life comet 23 proximal to the god shaft cycles chain 37 to sun planet comets 21. Collected spin from all comets is shared among them via chain 96 which cycles from free planet transfer sprockets 95 to sun planet transfer sprockets 99.
Figure 39 is a top view of the motor shown in Figure 38 and illustrates more clearly the pivot pins 100 between the main lever arms 89 and the scissor butterfly arms 90/62. It also shows how there must be cutouts 63 in the main lever arms 89, and in the matrix walls 60 around the life shafts 3.
Figure 40 is a top view of a Sweagle having its sun sprockets 8 at the sides of the motor rather than in the middle of it. All other elements are essentially the same as what exist in the embodiment shown in Figure 39.
Figure 41 is a top view of a one-sided Sweagle, having only one sun sprocket 8, and one lion sprocket 14, and the other elements which exist in Figures 39 and 40, but in fewer numbers.

OWL
Figure 42 is a top view through the equatorial section, of a single-ended, wide owl motor, having an angel shaft 2 fulcrum, before chain is applied. The god shaft 1 ends mid-motor where it carries a sun sprocket 8 at each end. Ox sprockets one the mid-motor ends of the angel shafts 2 engage the sun sprockets chain 38 overlap strands (not yet seen), and lion

sprockets 14 are found at the outer ends of the angel shafts 2. Also on each angel shaft, mid-shaft, is an angel lamb sprocket. At each end of the life shaft 3 is a wolf sprocket 17 which engages the lion sprocket chain 39 (not yet seen). Mid-way on the life shaft 3 are two life lamb sprockets 22 and an owl sprocket 30. The owl sprocket 29 cycles chain 34 to a moon sprocket 11, which resides midway on the god shaft. The angel shafts 2 are the fulcrums for the long lever 43.

Figure 43 is a top view through the equatorial section, of a single-ended wide owl motor, having a god shaft 1 fulcrum, before chain is applied. The figure also indicates that two of the support posts 57 are beyond the lion wheels, and that short fixed distance arms 41 extend from the angel shafts 2 to the life shafts 3. Also, bearing travel slots are cut into the long levers 42 to accommodate the difference is distances when the levers are swung; and fulcrum sleeves 33 are fixed to the god shaft posts 55 and used to minimize wear on the god shaft 1.

Figure 44 is an elevation of a double-ended, two-sided embodiment, which has lion sprockets 14 that extend beyond the radial distance to the god shaft 1. Also, the radius of the moon sprocket 11 extends beyond the distance to the angel shaft 2. Thus, in a wide owl motor (i.e. one having working wheels on both sides of the god wheel 8 or 9) the angel shafts 2 cannot be a continuous single piece.

Figure 45 is a top view through the equatorial section, of the embodiment expressed in Figure 44 indicating how the flanking lion sprockets 14 may overlap one another, yet still be functional.

Figure 46 is an end view of a wide owl motor with multiple shepherd shafts 4 before any chain is applied.

Figure 47 is the embodiment shown in Figure 46 with chains applied to all related elements except to the shepherd-to-work wheel sprocket 74. Note that the overlapping of life shepherd sprockets 25 suggest that there is another wheel involved, but that is not the case.

Figure 48 is an end view of the embodiment indicating the extent of the lever cross braces (not shown) and the relay shaft assemblies they carry 27, and with a discrete utility unit 76. Note that chain 75 is cycled from the shepherd-to-work sprocket 74 to the work receiving sprocket 80 which is fixed to the work receiving shaft 78.

LARK

Figure 49 is an elevation, in part, of a single ended embodiment having chain 34 cycling from lark sprocket 29 to moon sprocket 11 as its primary feedback device. It has as its fulcrum, angel shafts 2 and so must have a cutout 63 in its lever arms 43. It also indicates that the sun wheel might be either an internal gear 9 or a sprocket 8, that the ox wheel might be with a spur gear 13 or a sprocket 12, that the lion wheel might be either an internal gear 15 or a sprocket 14, and that the wolf wheel might be either a spur gear 18 or a sprocket 17 accordingly. The lark also has a moon sprocket 11 that extends beyond the radius of the angel shaft 2

Figure 50 is an end view of a two-sided motor before chain is applied to the sun-ox set, and to the lion-wolf set. Note that the sun sprockets 8 are at the sides of the motor, instead of being mid-motor as with the owl designs. The lark also used a bird-to-moon feedback device. Note also that sleeve plates 66 carrying pivot sleeves 33 (which surround the angel 2 ((or god shaft1)) are fixed by bolts, rivets, or similar device 65 to the

angel shaft post 57, to the god shaft post 55, or to the matrix wall 60, according to which support element is used.
Figure 51 is an end view of the embodiment in Figure 50 with all chains applied.
Figure 52 is a top view of an embodiment having the god shaft 1 as the lever fulcrum, before chains are applied. Note that bearing travel slots 40 exist in both of the lever arms 42 and that fixed distance short arms 41 from the angel shafts 2 to the life shafts 3 must exist in this design.
Figure 53 is a top view of the embodiment after chains have been applied to all sprockets but the angel lambs 24, and life lambs 22.
Figure 54 is a top view of a double ended, one sided, lark motor that uses a sprocket 8 as the sun wheel and sprockets 14 as the lion wheels.

SPARROW
Figure 55 is an elevation of a one-ended sparrow embodiment illustrating how the radius of the moon sprocket 11 does not extend as far as the angel shaft 2. This design allows the angel shaft to remain as a single piece, but keeps the sparrow sprocket 28 small relative to the other wheels on the life shaft. Also, because more slack chain 34 can exist when the life shaft 3 is levered up or down, the feedback response is not as immediate as in the Lark design. In this embodiment, no resistance system is used.
Figure 56 is an elevation of a double-ended motor having a resistance chain 36 cycling from life lambs 22, but not from an angel lamb. The resistance to the contra rim (that rim which distal to the lion rim) of the life lamb 22 is caused by the fact that the relay wheels 27 are in a fixed position (because their relay shafts are fixed via bearings 52, which induces the contra rims 73 to have to 'run uphill' when they are levered from an equatorial stasis. In this design there is no discrete resistance unit, so any of the relay wheels 27 might be tapped equally effectively to provide work.
Figure 57 is an elevation of an embodiment having angel lamb wheels 24 in addition to the life lamb wheels 22, both types of which cycle chain 35 and 36 around shepherd sprockets—life shepherd sprockets 25, and angle shepherd sprockets 26—over and under their own positions, whose different wheel sizes resolve the different spin rates of the two lamb types.
Figure 58 is an elevation of an embodiment with life lamb sprockets 22 whose matrix wall 60 no longer supports the relay shafts 27 (which are instead supported by lever cross braces ((not yet shown))), but only the god shaft 1 and angel shafts 2, and a discrete shepherd/work shaft 4 are fixed.
Figure 59 is an elevation of the embodiment shown in Figure 58 showing how the relay shafts 6 are held by the cross braces 61 of the long lever arms 42. The lever arms also indicate shaft avoidance cutouts 63 in them to avoid touching the angel shafts 2 when they arc about the god shaft 1. In this embodiment only life lambs 22 are used to transfer resistance to the pro rims 72 of the wolf sprockets 17, causing them to seek the easier spin direction and force the life wheels against the lion wheels instead of away from the them.
Figure 60 is an elevation of a double-ended embodiment having angel lambs 24 and life lambs 22 with separate relay sprockets 27 for each type. The different speeds of the two chain types are finally resolved by the wheels on the single shepherd shaft 4.

Work/resistance is sent/received to/from a separate utility site 76 via chain or belting 75 from the shepherd-to-work sprocket 74 to the work receiving sprocket/sheave 80.

DOVE

Figure 61 is an elevation of a single-ended embodiment that uses the life comet-to-plant comet feedback device, as does the eagle design, rather than the bird to moon system. The radius of its lion wheel does not extend to the god shaft. It also indicates that the sun and lion wheels might be internal gears 9 or 15 or sprockets 8 or 14 with multi-strand chain fixed to them; that the ox and wolf wheels might be gears 13 or 18, or sprockets 12 or 17 accordingly; that the ox wheel, the lion wheel and the angel lamb wheel are the same size; and that the wolf wheel, the comet wheel, and the life lamb wheel are the same size. Further, it indicates a discrete utility unit 76 which is, in effect, a second shepherd element. The long lever cross brace 62 is in a butterfly configuration, carrying its relay wheels 27 side by side, instead on one over another. Because the life lamb sprocket 22 is smaller than the angel lamb sprocket 24 in this case, the chain speeds do not have to be resolved by different sized shepherd wheels 25 and 26, nor by the receiving work sprocket 80.

Figure 62 is an elevation of an embodiment that uses one sprocket wheel 81 to serve two purposes: the pro rim 72 of the wheel cycles chain 37 to the planet comet sprockets 21 via relay sprockets 27, while the contra rim 73 of the wheel 81 cycles chain 35 to the shepherd 25 and work 80 wheels via relay sprockets 27. The chain 37 from the pro rim 72 of the life lamb sprockets travels around the entire motor virtually, in order that it not interfere with the chain coming from the contra rim 73.

Figure 63 is an elevation of an embodiment in which work/resistance is sent/received to/from a utility 76 that is anterior in the motor, instead of being posterior in the motor, as is indicated in Figures 61 and 62. In this embodiment the shepherd sprockets also serve as the final work sprockets 80.

Figure 64 is an elevation of an embodiment in which the planet sprockets 19 are more forward/anterior in the motor, and fixed relay sprockets 27 exist over and under them. Only one pair of relay sprockets 27 exist on the cross braces 61 of the lever 43. The different shepherd sprocket sizes 25 and 26 are shown to clarify relative chain vectors 35 and 36 from the life lamb sprockets 22 and the angel lamb sprockets 24, and because the angel lamb sprockets are smaller in this embodiment than in that shown in Figure 63. In t his embodiment a discrete work wheel 80 is separate from the shepherd wheels, and is reached via chain or belting 75.

Figure 65 is an elevation of an embodiment in which angel lambs are not present, and only life lambs 22 cycle chain 35 to a shepherd sprocket 26 via relay sprockets 27. A shepherd-to-work wheel 74 cycles chain or belting 75 to a work receiving sprocket or sheave 80 in a specific utility site 76.

SUNDRY

Figure 66 is an elevation in schematic of a sun wheel 9 that is an internal gear supported by a disc 10 which reaches in to the god shaft 1, and an ox wheel 13 that is a pinion gear. The lion and angel lamb wheels 14 and 24 are sprockets and are the same size as the ox wheel; and the life lamb 22 and comet sprockets 23 are the same size as the wolf sprocket 17.

wheel 13 that is a pinion gear. The lion wheel 15 is also an internal gear, so the wolf wheel 18 must be a pinion too. The angel lamb sprocket 24 is the same size as the ox wheel 13, and the life lamb 22 and life comet 23 wheels are the same size as the wolf spur gear 18.

Figure 68 is an elevation in schematic of a sun wheel 8 and lion wheel 14 that are both sprockets, and an ox wheel 12 and wolf wheel 17 that must also be sprockets as they engage the sun and lion via multi-strand chains which surround the big wheels and lap one or two strands (of a two or three strand multiple). The lion and angel lamb wheels are the same size as the ox wheel, and the life lamb and comet wheels are the same size as the wolf wheel. In such a case, multi-stranded chain is fixed to the sun sprocket or lion sprocket, and the marrying wheel, whether ox or wolf, engages the overlapping chain strand.

Figure 69 is an elevation in schematic of a sun wheel 8 that is a sprocket, and an ox wheel 12 that is a sprocket. The lion wheel 15 is an internal gear fixed to a disc, which reaches to a bushing 53 on the angel shaft 2. Also fixed to the disc is a spacer/washer 64, to which the rim of a life lamb sprocket 22, or a life comet sprocket 23 may be fixed, negating the need or mass of a full wheel reaching to the life shaft 3.

Figure 70 is a side view of a sleeve 33 and plate 66 element, which surrounds either the god shaft 1 or the angel shaft 2 according to which of them is the lever fulcrum, and which allows the lever to arc about the shaft without wearing directly on the shaft itself, and creating unnecessary friction. The plate is fixed to an adjoining wall or post via bolts or rivets 65, or some similar connecting device, and the shaft and bearing still have freeway.

Figure 71 is a side view of a sleeve element, which is sandwiched between two post sides: and god shaft post 55 or an angel shaft post 57. Posts can be installed as a more sequential method owing to the fact that they are in two parts (in this particular case) which are held together by a connecting bolt 71.

Figure 72 is an edge-on view of a post wall 55 or 57, or a matrix wall 60, that illustrates connecting elements 65 of the sleeve unit (plate 66 and sleeve 33) to the post or matrix wall. It also indicates that it might be used with either the god shaft 1, or the angel shaft 2, depending on which of them is the fulcrum.

Figure 73 is an end view of a lark motor in part, having a moon sprocket 11 serve also as an anchor wheel for a sun sprocket 8 which is separated one from the other by an spacer washer 64.

Figure 74 is an end view of a sprocket-anchor wheel combination 105 which supports a sun wheel internal gear 9.

Thunderbird Infinite Motor Drawings

Drawings which illustrate embodiments of the invention are divided into eight major sections, and include a final (ninth) section of sundry elements:
EAGLE having a sun wheel mid-motor, and cycling chain to comet wheels on life shaft and planet shaft
[figures 1 to 17]
Figure 1 is an elevation in X-ray section of a section of an embodiment showing fundamental elements of the Eagle design, and the location of a class two lever option. (It also shows where the window would exist for the class one lever in Figure 1.) Figure 2 is an elevation in X-ray of an embodiment which does not employ relay wheels to send chain to the comet sprockets, and which uses a class one lever option. Figure 3 is an elevation, partly in section (showing mainly middle elements) of an embodiment which employs relays wheels to send chain from life comet wheels to planet comet wheels; to send chain from life lamb wheels to life shepherd wheels; and to send chain from angel lamb wheels to angel shepherd wheels. Figure 4 is an elevation in X-ray of the more completed embodiment shown in Figure 3, including a large lion wheel, and the installation of a utility unit. Figure 5 is a top view of the embodiment in equatorial section, of Figures 3 and 4, before relay shafts, and chains are installed. Figure 6 is a top view of the embodiment with relay shafts and chains installed, Figure 7 is an elevation of an embodiment which does not use relays wheels to send chain from the life comet sprocket to the planet comet sprocket. Figure 8 is a top view of a levering option for any double-ended embodiment, which uses the god shaft as the fulcrum for the long levers, plus short arms from the angel shafts to the life shafts in order to maintain necessary distances. Figure 9 is the top view of a second levering option for any double-ended embodiment, in which a middle, main, long lever controls two flanking short levers via pin blocks (which accommodate distance changes from the life shaft to the god shaft). This option also improves the leverage values of the flanking levers. Figure 10 is a side view of the main lever, its intermediate pin blocks, and the two flanking levers found in Figure 11 is an elevation of a simplified single-ended embodiment which has only one feedback loop and no outside source of resistance, whose life comet sprocket is the same radius as the wolf wheel. It also indicates how the lever may be installed in two parts. Further, it indicates that the sun wheel and lion wheel might be either internal gears or sprockets surrounded by multi-strand chain, and the ox wheel and the wolf wheel might be spur gears or sprockets accordingly. Figure 12 is an elevation of an embodiment similar to that in Figure11, except that it includes a resistance/work source, which acts on the contra-rim of the life lamb [the life lamb also happens to have the same radius as the wolf wheel.] Figure 13 is an elevation of an embodiment in schematic form, which is similar to that shown in Figure 12, except that the lion wheel is considerably smaller than earlier, and the wolf and lamb wheels are smaller accordingly. Figure 14 is an elevation of a double-ended motor carrying a resistance wheel above, but unattached and beyond the radius of, the sun wheel. It also has a chain traveling from the contra-rim of the life lamb via relay sprockets, to that resistance source. Figure 15 is an elevation of a double-ended embodiment which is similar to that which is shown in Figure 14, except that a support matrix for fixed-place shafts is revealed, and a 'butterfly' configuration of relay wheels exists on the cross braces of the lever ends. Figure 16 is an elevation of the

embodiment shown in Figure 15 indicating the chain vectors, Figure 17 is an elevation of an embodiment which is similar to that which is shown in Figure 14, but which also carries relay sprockets over and under the angel shaft and aligned with an angel lamb sprocket on each angel shaft, and an angel shepherd sprocket on the shepherd shaft respectively. This configuration allows chain to be sent from the contra-rim of each angel lamb to the shepherd shaft, contributing to the work force, reconciling with rotational force from the life shaft assembly, and providing a further feedback loop.

LOON having the sun wheel serve also as a moon sprocket [figures 18 to 32]

Figure 18 is a top view of an embodiment (called 'loon simplex') in which a triple stranded chain surrounds a very large sun wheel, and extends to a set of triple sprockets. The overhanging chain strands are engaged on the side of the god shaft which is opposite the triple sprockets by ox sprockets—one on each side of the sun sprocket. This variation has no artificial resistance source. Other elements of the loon simplex design are similar to those described in the simplest of 'eagle series' designs.

Figure 19 is a top view of the 'loon complex' design before chains are applied to it. It also indicates where subsequent elevations of sections of the motor exist in the overall design variation. Figure 20 is a top view of the embodiment shown in Figure 19 with chains in place. Figure 21 is an elevation of those main elements of the loon complex which exist within the confines of the lever arms i.e. sections iii, iv, v, vi, and x, but not section vii, nor viii. Figure 22 is an elevation of the embodiment showing section iii, Figure 23 is an elevation of the embodiment showing section iii, in which the sending wheel on the shepherd shaft is a gear and the receiving wheel is a pinion, Figure 24 is an elevation of section iii in which the shepherd shaft is also the final receiving shaft, Figure 25 is an elevation of the 'loon complex' embodiment showing section iv, Figure 26 is an elevation of the embodiment showing section v, Figure 27 is an elevation of the embodiment showing section vi, Figure 28 is an elevation of the embodiment showing section vii, Figure 29 is an elevation of the embodiment showing section viii, Figure 30 is an elevation of the embodiment showing section x, Figure 31 is an elevation of section iii of a 'loon complex' embodiment, in which the receiving shepherd assembly is forward of the life shaft assembly instead of being retro of it, Figure 32 is a top view of the embodiment shown in Figure 31.

Gap: no Fig. 33!

SWAN having a life shaft which is closer to the god shaft than is the angel shaft [figures 34 to 36]

Figure 34 is an X-ray elevation of an embodiment called the 'swan' (or 'reflux owl'), in which the sun wheel remains in the middle of the design, but the life shafts—one on each side of the sun wheel—are placed nearer the god shaft than is the angel shaft. [This design permits a resistance source to influence the contra rim of life lamb, but does not easily allow a contra rim on the angel shaft assembly to reconcile on a shepherd assembly with a life lamb. This variation also carries single unit shepherd shafts which are placed beyond the radius of the sun wheel and extend resistance to life lambs on both sides of the single sun wheel.] In this embodiment one of the shepherd sprockets also serves as a worker wheel. Figure 35 an X-ray elevation of a loon embodiment, in which a separate

shaft assembly serves as the work/utility site. Figure 36 is an X-ray top view of the embodiment shown in Figure 34.

SWEAGLE a hybrid motor, having elements of both the Eagle and the Swan [figures 37 to 41]

Figure 37 is an elevation of an embodiment in part, which shows a butterfly crossbrace array, which pivots on a class one long lever, anterior to the life shaft. Figure 38 is a fuller representation of the embodiment displayed in Figure 37, showing chain vectors, including lamb chains, which cycle to both the anterior and posterior of the motor system. Figure 39 is a top view of the motor shown in Figure 38. Figure 40 is a top view of a Sweagle having its sun wheels at the sides of the motor rather than in the middle of it. Figure 41 is a top view of a one-sided Sweagle.

OWL having sun wheel/s mid-motor, and using moon-to-bird chain as a feedback device [figures 42 to 48]

Figure 42 is a top view through the equatorial section, of a single-ended wide owl motor, having an angel shaft fulcrum, before chain is applied. Figure 43 is a top view through the equatorial section, of a single-ended wide owl motor, having a god shaft fulcrum, before chain is applied. Figure 44 is an elevation of a double-ended, two-sided embodiment, which has lion sprockets that extend beyond the radial distance to the god shaft. Figure 45 is a top view through the equatorial section, of the embodiment expressed in Figure 44. Figure 46 is an end view of a wide owl motor with multiple shepherd shafts before chain is applied (slightly altered such that one of the lion-wolf sets does not show). Figure 47 is the embodiment shown in Figure 46 with chain applied to all related elements. Figure 48 is an end view of an embodiment showing the extent of the lever cross braces and the relay shaft assemblies they carry, and with a discrete utility unit.

LARK having sun wheel/s at motor side/s, and a moon sprocket which extends through angel shaft/s [figures 49 to 54]

Figure 49 is an elevation, in part, of a single ended embodiment having chain cycling from lark to moon as its primary feedback device. It also indicates that the sun wheel might be either an inside gear or a sprocket, that the ox wheel might be with a spur gear or a sprocket, that the lion wheel might be either an inside gear or a sprocket, and that the wolf wheel might be either a spur gear or a sprocket accordingly. Figure 50 is an end view of a two-sided motor before chain is applied to the sun-ox set, and to the lion-wolf set. Figure 51 is an end view of the embodiment in Figure 50 with all chains applied. Figure 52 is a top view of an embodiment having the god shaft as the lever fulcrum before chains are applied. Figure 53 is a top view of the embodiment after chains have been applied. Figure 54 is a top view of a double ended, one sided, motor that uses sprockets as the sun wheel and the lion wheel.

SPARROW having sun wheel/s at motor side/s, and a moon sprocket which does not extend through shaft/s [figures 55 to 60]

Figure 55 is an elevation of a one-ended sparrow embodiment illustrating how the radius of the moon sprocket does not extend to the angel shaft. This design allows the angel

shafts to remain as a single piece, but keeps the sparrow sprocket small relative to the other wheels on the life shaft. Also, because more slack chain can exist when the life shaft is levered up or down, the feedback response is not as immediate as in the Lark design. Figure 56 is an elevation of a double-ended motor having a resistance chain coming from a life lamb, but not from an angel lamb. The resistance to the contra rim of the life lamb is caused by the fact that the relay wheels are in a fixed position, which induces the contra rims to have to 'run uphill' when they are levered from an equatorial positioning. In this design there is no discrete resistance unit, so any of the relay wheels might be tapped equally effectively. Figure 57 is an elevation of an embodiment having angel lamb wheels in addition to the life lamb wheels, both types of which cycle chain around shepherd sprockets over and under their own positions, whose different wheel sizes resolve the different spin rates of the two lamb types. Figure 58 is an elevation of an embodiment whose matrix wall no longer supports the relay shafts, but only the god and angel shafts, and a discrete shepherd/work shaft. Figure 59 is an elevation of the embodiment shown in Figure 58 showing how the relay shafts are held by the cross braces of the long lever arm. The lever arm also indicates shaft avoidance cutouts in it to avoid touching the angel shafts when it arcs about the god shaft. Figure 60 is an elevation of a double-ended embodiment having angel lambs and life lambs with separate relay sprockets for each type. The different speeds of the two chains types are resolved by the wheels on the shepherd shaft. Work/resistance is sent/received to/from a separate utility site via chain or belting.

DOVE having a lion wheel whose radius is less than the distance from the angel shaft to the god shaft. and sun wheels which are located at the sides of the motor [figures 61 to 65]

Figure 61 is an elevation of a single-ended embodiment that uses the life comet-to-plant comet feedback device as does the eagle design, rather than the bird to moon system. The radius of its lion wheel does not extend to the god shaft. It also indicates that the sun and lion wheels might be internal gears or sprockets with multi-strand chain fixed to them; that the ox and wolf wheels might be gears or sprockets accordingly; that the ox wheel, the lion wheel and the angel lamb wheel are the same size; and that the wolf wheel, the comet wheel, and the life lamb wheel are the same size. Further, it indicates a discrete utility unit which is, in effect, a second shepherd element. Figure 62 is an elevation of an embodiment that uses one sprocket wheel to serve two purposes: the pro rim of the wheel cycles chain to the planet comet via relay sprockets, while the contra rim of the wheel cycles chain to the shepherd and work wheels via relay sprockets. Figure 63 is an elevation of an embodiment in which work/resistance is sent/received to/from a utility that is anterior to the motor, instead of being posterior to the motor, is as indicated in Figures 61 and 62. Figure 64 is an elevation of an embodiment which also has its utility sited anterior in the motor, but has differently defined wheel sizes, and different chain vectors. Figure 65 is an elevation of an embodiment which does not use angel lamb sprockets, but only life lamb sprockets.

SUNDRY various elements which exist in one or more of the above motors [figures 66 to 74]

Figure 66 is an elevation in schematic of a sun wheel that is an internal gear, and an ox wheel that is a pinion gear. The lion and angel lamb wheels are the same size as the ox wheel, and the life lamb and comet wheels are the same size as the wolf wheel. Figure 67 is an elevation in schematic of a sun wheel that is an internal gear, and an ox wheel that is a pinion gear. The lion wheel is also an internal gear, so the wolf wheel must be a pinion too. The angel lamb wheel is the same size as the ox wheel, and the life lamb and comet wheels are the same size as the wolf wheel. Figure 68 is an elevation in schematic of a sun wheel and lion wheel that are both sprockets, and an ox wheel and wolf wheel that must also be sprockets. The lion and angel lamb wheels are the same size as the ox wheel, and the life lamb and comet wheels are the same size as the wolf wheel. In such a case, multi-stranded chain is fixed to the sun sprocket or lion sprocket, and the marrying wheel, whether ox or wolf, engages the overlapping chain strand. Figure 69 is an elevation in schematic of a sun wheel that is a sprocket, and an ox wheel that is a sprocket. The lion wheel is an internal gear fixed to a disc, which reaches to a bushing on the angel shaft. Also fixed to the disc is a spacer/washer to which the rim of a life lamb sprocket, or a comet sprocket may be fixed, negating the need or weight of a full wheel reaching to the life shaft. Figure 70 is a side view of sleeve and plate element, which surrounds either the god shaft or the angel shaft according to which of them is the lever fulcrum, and which allows the lever to arc about the shaft without wearing directly on the shaft itself, and creating unnecessary friction. Figure 71 is a side view of a sleeve element, which is sandwiched between two post sides, which allows a more sequential installation. Figure 72 is an edge-on view of a post wall or matrix wall, that illustrates connecting elements of the sleeve unit to the post or matrix wall. It also indicates that it might be used with either the god shaft, or the angel shaft, depending on which of them is the fulcrum. Figure 73 is an end view in part of a lark configuration having moon sprockets which serves also anchor wheels for sun sprockets via spacer washers. Figure 74 is a partial end view (or top view) of a sprocket which serves also as the disc on which an internal gear is based.

shafts to remain as a single piece, but keeps the sparrow sprocket small relative to the other wheels on the life shaft. Also, because more slack chain can exist when the life shaft is levered up or down, the feedback response is not as immediate as in the Lark design. Figure 56 is an elevation of a double-ended motor having a resistance chain coming from a life lamb, but not from an angel lamb. The resistance to the contra rim of the life lamb is caused by the fact that the relay wheels are in a fixed position, which induces the contra rims to have to 'run uphill' when they are levered from an equatorial positioning. In this design there is no discrete resistance unit, so any of the relay wheels might be tapped equally effectively. Figure 57 is an elevation of an embodiment having angel lamb wheels in addition to the life lamb wheels, both types of which cycle chain around shepherd sprockets over and under their own positions, whose different wheel sizes resolve the different spin rates of the two lamb types. Figure 58 is an elevation of an embodiment whose matrix wall no longer supports the relay shafts, but only the god and angel shafts, and a discrete shepherd/work shaft. Figure 59 is an elevation of the embodiment shown in Figure 58 showing how the relay shafts are held by the cross braces of the long lever arm. The lever arm also indicates shaft avoidance cutouts in it to avoid touching the angel shafts when it arcs about the god shaft. Figure 60 is an elevation of a double-ended embodiment having angel lambs and life lambs with separate relay sprockets for each type. The different speeds of the two chains types are resolved by the wheels on the shepherd shaft. Work/resistance is sent/received to/from a separate utility site via chain or belting.

DOVE having a lion wheel whose radius is less than the distance from the angel shaft to the god shaft. and sun wheels which are located at the sides of the motor [figures 61 to 65]

Figure 61 is an elevation of a single-ended embodiment that uses the life comet-to-plant comet feedback device as does the eagle design, rather than the bird to moon system. The radius of its lion wheel does not extend to the god shaft. It also indicates that the sun and lion wheels might be internal gears or sprockets with multi-strand chain fixed to them; that the ox and wolf wheels might be gears or sprockets accordingly; that the ox wheel, the lion wheel and the angel lamb wheel are the same size; and that the wolf wheel, the comet wheel, and the life lamb wheel are the same size. Further, it indicates a discrete utility unit which is, in effect, a second shepherd element. Figure 62 is an elevation of an embodiment that uses one sprocket wheel to serve two purposes: the pro rim of the wheel cycles chain to the planet comet via relay sprockets, while the contra rim of the wheel cycles chain to the shepherd and work wheels via relay sprockets. Figure 63 is an elevation of an embodiment in which work/resistance is sent/received to/from a utility that is anterior to the motor, instead of being posterior to the motor, is as indicated in Figures 61 and 62. Figure 64 is an elevation of an embodiment which also has its utility sited anterior in the motor, but has differently defined wheel sizes, and different chain vectors. Figure 65 is an elevation of an embodiment which does not use angel lamb sprockets, but only life lamb sprockets.

41 short, fixed-distance arm (from angel shaft to life shaft)
42 long/lever (god shaft to life shaft) arm (class 1, or class 2 lever)
43 long/lever (angel shaft to life shaft) arm
44 connecting/stiffening brace (lever-to-lever or matrix-to-matrix)
45 god shaft bearing
46 angel shaft bearing
47 life shaft bearing (fixed place on lever or hold-off arm)
48 life shaft bearing (traveling slightly in lever arm slot)
49 yoke shaft bearing
50 planet shaft bearing
51 shepherd shaft bearing
52 common relay shaft bearing
53 bushing
54 chain tensioning bolt
55 god shaft post
56 planet shaft post
57 angel shaft post (also supporting shepherd shafts in some designs)
58 yoke shaft post
59 shepherd shaft post
60 fixed shaft support matrix (especially for relay shafts)
61 life lever cross brace—straight (supporting shepherd and/or comet relays)
62 life lever cross brace—butterfly (supporting shepherd and/or comet relays)
63 shaft avoidance gap in lever
64 spacer/washer
65 bearing sleeve plate connecting bolt and nut (or rivet, screw, etc.)
66 bearing sleeve plate
67 support/chassis wall/bulkhead/tie element
68 long, life lever arm half-section of split (to allow easier installation)
69 seam between both lever splits
70 split post seam on two sided post (for easier installation)
71 connecting bolt, rivet, clamp, or similar connecting element
72 pro-rim (of life lamb, or of angel lamb)
73 contra-rim (of life lamb, or of angel lamb)
74 shepherd-to-work wheel/sprocket
75 shepherd-to-work chain/belt
76 resistence/work source (wheel/sprocket—pump, electricity generator, mill, etc.)
77 let-through window (of support matrix or motor container, allowing through extension of lever)
78 work receiving shaft
79 work receiving bearing
80 work receiving wheel (sprocket, sheave)
81 comet-lamb sprocket (sending chain to the planet comet sprocket from its pro-rim, and sending chain to the life shepherd sprocket from its contra-rim.
82 life relay sprocket
83 yoke relay sprocket

84 life-yoke feedback chain
85 shepherd-to-work gear
86 work pinion
87 shepherd/worker wheel (shepherd shaft is also the end user shaft, in effect combining #4 and #78)
88 shaft avoidance gap in fixed-shaft support matrix
89 single-scissors long lever
90 single-scissors short lever
91 double-scissors long lever
92 double-scissors short lever
93 free planet shaft
94 free planet comet
95 free planet transfer sprocket
96 transfer chain (from free planet assembly to sun planet assembly)
97 anterior utility
98 posterior utility (existing on the same side of the sun wheel as the main leverage force originates from, if a class one lever)
99 sun-planet transfer sprocket
100 pivot pin: long lever to scissors lever
101 pivot pin block
102 pivot pin hole
103 sandwich site for pin block (between long/middle lever and flanking lever)
104 partial, or whole, wheel assembly: various sprocket and/or gear configurations
105 sprocket/support disc combination
106 pressure source on lever: pneumatic
107 ps: hydraulic
108 ps: magnetic
109 ps: block and tackle
110 ps: mass to gravity
111 ps: thermal expansion/contraction (of solid, liquid or gas)
112 ps: mechanical lever-on-lever
113 ps: manual pull or push on lever
114

Thunderbird Infinite Motor **Claims**

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:
EAGLE
1 A single-ended motor having a central main shaft (called a god shaft) supporting a disc near or at its midsection. The god shaft is supported through bearings to matrix walls at each end. The disc has attached to it, very large internal gears (called sun wheels)—one on each side. A large spur gear (called an ox wheel) engages each internal gear at its equatorial, and two smaller spur gears (called planet spur gears) engage each internal gear—one at each polarity. The large spur gear is called an ox gear and rides on a fixed-place angel shaft—one on each side of the sun wheel disc; the smaller spur gears are called planet gears and ride on fixed-place sun-planet shafts via bearings. Also on each angel shaft is fixed a very large disc to which a very large internal gear is attached (called a lion wheel). Engaging the lion wheel is a spur gear (called a wolf wheel). Wolf wheels are fixed—one at each end—to a life shaft. All fixed place shafts key into two or more matrix walls.
A lever fulcrums on each angel shaft, and supports the life shaft, which (while in stasis) is on the same equatorial as the god shaft and the angel shaft. Two class one lever arms are used, and are joined to one another by a stiffening brace.
Lever arms extend beyond the reach of the motor matrix walls posterior of the god shaft via an access window in the motor bulkhead. The life shaft wheel assembly includes life comet sprockets, which cycle feedback chain without the aid of relay wheels to planet comet sprockets, which reside on each sun-planet shaft. Shaft avoidance gaps are cut into the long lever arms in order to allow the lever to fulcrum on the angel shaft without touching the god shaft.

2 A single-ended motor as described in Claim 1, but having two relay wheels fixed to cross braces which are attached to the long lever arms—one over the life shaft and one under it, which allow the chain cycling from the life comet sprocket to the planet comet sprockets to be redirected (and not encumber other elements) via the relay wheels on the lever braces.

3 This embodiment is similar to that claimed in Claim 2, but fixed to the matrix wall is a shepherd shaft, found outside the radius of the sun wheel, and placed on the side of it opposite the angel shaft (called the posterior side) but sharing the same equatorial; and two relay wheels are fixed over the life wheel assembly, and two under it. Further, life comet sprockets cycle chain from their pro rims (which exist distal to the angel shafts) to the planet comet sprockets via one set of relay sprockets. Also on the life shaft are life lamb sprockets which cycle chain from their contra rims (which exist proximal to the angel shafts) to shepherd sprockets via relay sprockets. Resistance on the shepherd shaft (in the form of an electrical generator, or some other utility, or a slight braking device, causes sufficient resistance to the life wheel assembly that it seeks the less resistant direction in which to spin, which is against the lion wheels and the train of wheels which are related to them causing the spin to be sustained until force against the levers is

removed (if in a zero gravitational field; otherwise its own mass might be enough to keep it going).

4 A single-ended motor as described in Claim 3, but having lamb sprockets on the angel shafts too. Also, relay wheels aligned to the angel sprockets, over and under them, are fixed to matrix walls such that chain from the angel lambs can be cycled to angel shepherd wheels existing on the same shaft as holds the life shepherd wheels.

5 An embodiment similar to that described in Claim 4 having a very large internal gear (called a lion wheel) which is also a part of each angel shaft wheel assembly. A spur gear (called a wolf wheel) engages the lion wheel on its pro/distal side. Pro/comet chain cycles from the life comets to the planet comets; and contra chain, both life lamb chain, and angel lamb chain, cycle to the life shepherd sprockets and the angel shepherd sprockets. The shepherd shaft carries four sprockets, which receive/send work force from wheels on the anterior side of the god shaft, and reconciles the respective chain speed rates with different sized sprockets. The shepherd also carries a sending wheel near its mid-length, another sprocket, multiple sprocket, or sheave, which sends chain or belting; or a gear sends rotational force, to/from a receiving wheel which produces some form of utility.

6 An embodiment similar to that described in Claim 5 fulcrum sleeves to bear on instead of having to bear directly onto the angle shaft itself. Each sleeve is connected to a plate which fastens to an adjoining motor wall or post via bolts or rivets.

7 An embodiment similar to those described above, having an additional support post at each of the outer ends of the angel shafts.

8 An embodiment similar to those above, in which each lever may be installed in two parts and fastened with bolts in a more sequential motor building method.

9 An embodiment which is double ended: having ox wheels which engage each sun wheel at two sites on the same equatorial, and resulting additional angel shafts, life shaft and wheel assemblies that they entail. The lever fulcrum must now be the god shaft, and so bearing slots must exist on each long lever, and short arms from the angel shaft to the life shaft must also be in place. Also, cutouts must now exist in the long levers around the angel shaft sites so those shafts will not interfere with the arcing of the levers. In this particular embodiment only life lambs exist to cycle chain to a shepherd in common to both ends of the motor via relay wheels. Similarly, life comets at both ends cycle chain in common to planet comet sprockets at both polarities. Also, two relay wheels exist on lever cross braces over, and two under, each life shaft in a vertical configuration.

10 An embodiment which is similar to that in Claim 9, in which angel lamb sprockets are present too. Because the angel lambs and life lambs are of a similar size, but spin at different rates, the shepherd sprockets must be different sizes to resolve the chain speed rates.

DOVE

11 An embodiment which is similar to that in Claim 3, having an angel wheel assembly none of whose wheels reach as far as the god shaft; and all of whose angel wheels are the same size; and all of whose life wheels are of a smaller, but

in common size. For simplicity, and for better leverage, the angel shafts are the fulcrums, but cutouts on the long levers where they pass the god shaft are not needed as the god shafts do not reach as far as the lever arms. Further, a discrete utility unit exists which receives spin from a separate sending wheel on a shepherd shaft. Only life lambs exist in this claim which cycle chain via relays, one of which relays also serves as a resistance source.

12 An embodiment similar to that in Claim 11, but having angel lambs as well as the life lambs. Because the life lamb sprockets and the angel lamb sprockets are different sizes, the shepherd sprockets do not have to be different sizes.

13 An embodiment similar to that in Claim 11, but having a relay sprocket cycle chain to a discrete work/resistance source which is in the posterior end of the motor .

14 An embodiment similar to that in Claim 12, but having a relay sprocket cycle chain to a discrete work/resistance source which is in the posterior end of the motor.

15 An embodiment similar to that in Claim 11, but having a relay sprocket cycle chain to a shepherd work/resistance source which is in the anterior end of the motor .

16 An embodiment similar to that in Claim 12, but having a relay sprocket cycle chain to a shepherd work/resistance source which is in the anterior end of the motor.

17 An embodiment similar to that in Claim 11, but having a relay sprocket cycle chain to a discrete work/resistance source which is in the anterior end of the motor.

18 An embodiment similar to that in Claim 12, but having a relay sprocket cycle chain to a discrete work/resistance source which is in the anterior end of the motor.

19 An embodiment similar to that in Claim 11, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having a relay sprocket cycle chain to a discrete work/resistance source which is in the posterior end of the motor .

20 An embodiment similar to that in Claim 12, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having a relay sprocket cycle chain to a discrete work/resistance source which is in the posterior end of the motor.

21 An embodiment similar to that in Claim 11, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having a relay sprocket cycle chain to a shepherd work/resistance source which is in the anterior end of the motor .

22 An embodiment similar to that in Claim 12, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having

a relay sprocket cycle chain to a shepherd work/resistance source which is in the anterior end of the motor.

23 An embodiment similar to that in Claim 11, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having a relay sprocket cycle chain to a discrete work/resistance source which is in the anterior end of the motor.

24 An embodiment similar to that in Claim 12, but having a sun wheel at each side of the motor and having a contiguous angel shaft and its wheel assembly inboard of the sun wheels (requiring that cutouts be made in the long lever arms); and having a relay sprocket cycle chain to a discrete work/resistance source which is in the anterior end of the motor.

SWAN

25 An embodiment whose life shaft is closer to the god shaft than is the angel shaft (and whose lion wheels might actually be wider than the sun wheels), and which cycles chain from the pro rim of its life comet to planet comets at the polarities of the sun wheel. The contra rims of life lambs sprockets cycle chain to shepherd sprockets whose shafts lie outside the radius of the sun wheels. One of the relay wheels serves as a resistance source.

26 An embodiment similar to that in Claim 25, in which a discrete resistance source in supplied, to which chain is cycled from the contra rims of life lambs via relay sprockets.

SWEAGLE

27 An embodiment which incorporates some of the elements of the Swan and some of the Eagle: A butterfly cross-brace array pivots about a pivot pin which connects to either of the long class one lever arms. The butterfly brace serves also as a scissors arm of a single scissors system: it pivots according to the swing of the lever, and thus controls the arcing of opposable wolf wheels, and their respective relay shafts. Chains, including life lamb chains, cycle to work receiving sprockets at both a anterior utility and a posterior utility of the motor system. Also, while the life comet which is more distal to the god shaft cycles chain to free planet comets found on free planet shafts, the life comet proximal to the god shaft cycles chain to sun planet comets. Collected spin from all comets is shared among them via chain which cycles from free planet transfer sprockets to sun planet transfer sprockets.

OWL

28 A single-ended, wide owl embodiment, having an angel shaft fulcrum. The god shaft ends mid-motor where it carries a sun sprocket at each end. Ox sprockets on the mid-motor ends of the angel shafts engage the sun sprockets' chain overlap strands, and lion sprockets are at the outer ends of the angel shafts. On each angel shaft, mid-shaft, is an angel lamb sprocket. Resistance chain is cycled from the contra rims of life lambs to shepherd sprockets, which reside on shepherd shafts which are outside the radius of the sun and moon wheels, over and under them. At each end of the life shaft is a wolf sprocket, which engages the lion sprocket chain. Mid-way on the life shaft is also an owl sprocket. The owl sprocket cycles chain to a moon sprocket, which resides midway on the god shaft. The angel

shafts are the fulcrums for the long lever. The bird-moon feedback device takes the place of a comet-to-comet device. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

29 An embodiment which is similar to that in claim 28, but having as its fulcrum the god shaft. This design necessitates bearing travel slots in the long levers, and additional short arms connecting the angel shafts the life shaft. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

30 An embodiment which is similar to that in Claim 28, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

31 An embodiment which is similar to that in Claim 29, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

32 A double-ended embodiment having the same moon sprocket, sun sprockets and lever arms in common to both ends, but doubling virtually all other elements in it. The double-ender requires a god shaft fulcrum, which in this case uses simple long lever arms with cutouts around the angel shafts, and bearing travel slots in the lever arms. It also requires short arms from angel shafts to the life shaft. The lion sprockets at the sides of the motor may overlap one another without ill effect. In this embodiment only the life shafts have lamb sprockets on them. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

33 An embodiment which is similar to Claim 32, but having lamb sprockets on its angel shafts too. They cycle chain to the same shepherd shafts as do the life shaft wheels. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

34 An embodiment which is similar to Claim 28, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

35 An embodiment which is similar to Claim 29, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

36 An embodiment which is similar to Claim 30, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

37 An embodiment which is similar to Claim 31, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain

is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

38 An embodiment which is similar to Claim 32, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

39 An embodiment which is similar to Claim 33, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

LARK

40 A single-ended embodiment having chain cycling from a lark/bird sprocket to a moon sprocket as its primary feedback device. It is different from the Owl in that its sun wheels exist on the sides of the motor rather than being mid-motor. It has as its fulcrum, angel shafts, and so must have a cutout in each of its lever arms around the god shaft. The sun wheels are sprockets that are positioned at the sides of the motor; the ox wheels sprockets, the lion wheels are sprockets, and that the wolf wheels are sprockets. The lark also has a moon sprocket that extends beyond the radius of the angel shaft necessitating two angel shafts. In this embodiment only the life shaft carries lamb sprockets, which cycle chain to shepherd relay sprockets whose shafts reside beyond the radius of the sun and moon wheels, and there is no discrete resistance source.

41 An embodiment which is similar to that in claim 40, but having as its fulcrum the god shaft. This design necessitates bearing travel slots in the long levers, and additional short arms connecting the angel shafts the life shaft. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

42 An embodiment which is similar to that in Claim 40, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

43 An embodiment which is similar to that in Claim 41, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

44 A double-ended embodiment having the same moon sprocket, sun sprockets and lever arms in common to both ends, but doubling virtually all other elements in it. The double-ender requires a god shaft fulcrum, which in this case uses simple long lever arms with cutouts around the angel shafts, and bearing travel slots in the lever arms. It also requires short arms from angel shafts to the life shaft. In this embodiment only the life shafts have lamb sprockets on them. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

45 An embodiment which is similar to Claim 44, but having lamb sprockets on its angel shafts too. They cycle chain to the same shepherd shafts as do the life shaft wheels. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

46 An embodiment which is similar to Claim 40, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

47 An embodiment which is similar to Claim 41, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

48 An embodiment which is similar to Claim 42, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

49 An embodiment which is similar to Claim 43, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

50 An embodiment which is similar to Claim 44, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

51 An embodiment which is similar to Claim 45, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

52 The long lever cross brace 62 is in a butterfly configuration, carrying its relay wheels 27 side by side, instead on one over another. Because the life lamb sprocket 22 is smaller than the angel lamb sprocket 24 in this case, the chain speeds do not have to be resolved by different sized shepherd wheels 25 and 26, nor by the receiving work sprocket 80.

SPARROW

53 A single-ended embodiment having chain cycling from a sparrow/bird sprocket to a moon sprocket as its primary feedback device. It is different from the Lark in that the radius of its moon sprocket does not extend as far as the angel shaft, allowing the angel shaft to remain as a single piece. It has as its fulcrum, angel shafts, and so must have a cutout in each of its lever arms around the god shaft. The sun wheels are sprockets that are positioned at the sides of the motor; the ox wheels sprockets, the lion wheels are sprockets, and that the wolf wheels are sprockets. In this embodiment only the life shaft carries lamb sprockets, which cycle chain to shepherd relay sprockets whose shafts reside beyond the radius of the sun and moon wheels, and there is no discrete resistance source.

54 An embodiment which is similar to that in claim 53, but having as its fulcrum the god shaft. This design necessitates bearing travel slots in the long levers, and

additional short arms connecting the angel shafts the life shaft. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

55 An embodiment which is similar to that in Claim 53, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

56 An embodiment which is similar to that in Claim 54, but having angel lamb sprockets as well as the life lamb sprockets. The different chain speeds are resolved by the different sized sprockets on the shepherd shaft/s. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

57 A double-ended embodiment having the same moon sprocket, sun sprockets and lever arms in common to both ends, but doubling virtually all other elements in it. The double-ender requires a god shaft fulcrum, which in this case uses simple long lever arms with cutouts around the angel shafts, and bearing travel slots in the lever arms. It also requires short arms from angel shafts to the life shaft. In this embodiment only the life shafts have lamb sprockets on them. No discrete resistance source is designed into this system, but any of the lamb relay/shepherd sprockets may be tapped equally effectively.

58 An embodiment which is similar to Claim 57, but having lamb sprockets on its angel shafts too. They cycle chain to the same shepherd shafts as do the life shaft wheels. No discrete resistance source is designed into this system, but any of the shepherd sprockets may be tapped equally effectively.

59 An embodiment which is similar to Claim 53, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

60 An embodiment which is similar to Claim 54, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

61 An embodiment which is similar to Claim 55, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

62 An embodiment which is similar to Claim 56, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

63 An embodiment which is similar to Claim 57, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

64 An embodiment which is similar to Claim 58, but which has a defined resistance source in the form of a specific utility, or in some other form of resistance. Chain is cycled from a shepherd shaft via a designated sprocket to another designated sprocket residing on a 'work wheel' shaft.

LOON

65 The Loon is similar to the Lark in that it also has a sun sprocket mid-motor, and too uses a moon-bird feedback device. However, the sun sprocket also serves as a moon sprocket A triple strand chain surrounds most of a very large sun sprocket, and extends to a set of triple sprockets which are positioned on a yoke shaft posterior to the god shaft. The overhanging chain strands are engaged by ox sprockets on each side of the sun sprocket anterior to the god shaft. This variation has no artificial resistance source. A feedback loop exists between the life relay sprocket and the yoke relay sprocket. In this case, the lion wheel and the wolf wheel are also sprockets. Other elements of the loon simplex design are similar to those described in the simplest of 'lark series' designs.

66 An embodiment similar to Claim 65, in which lamb sprockets exist on the life shaft, the which life lamb sprockets cycle chain to shepherd relay sprockets in the posterior end of the motor.

67 An embodiment similar to Claim 65, in which lamb sprockets exist on the life shaft, the which life lamb sprockets and angel lamb sprockets cycle chain to shepherd relay sprockets in the posterior end of the motor (offering an further feedback route from life shaft to angel shaft).

68 An embodiment similar to Claim 67, in which a sprocket on the shepherd shaft cycles chain to a discrete work sprocket.

69 An embodiment similar to Claim 67, in which life lamb sprockets and angel lamb sprockets cycle chain to shepherd sprockets which exist at the anterior end of the motor.

70 An embodiment similar to Claim 69, in which sending sprockets cycle chain to a discrete work sprocket at that end of the motor.

EXTRA

71 An embodiment, or series of embodiments, which has, or have, a sun wheel which is an internal gear, rather than the sprocket, which is presently found in one or more of the embodiments described above. [Note that the exception must be the sun-moon wheel in the Loon design series, which must use a sprocket.] In such cases, the ox wheel must be a sprocket too, and multi-strand chain must serve as the 'gear teeth.'

72 An embodiment, or series of embodiments, which has, or have, a sun wheel which is a sprocket, rather than the internal gear, which is presently found in one or more of the embodiments, described above. In such cases, the ox wheel must be a spur gear.

73 An embodiment, or series of embodiments, which has, or have, a lion wheel which is an internal gear, rather than the sprocket, which is presently found in one or more of the embodiments described above. In such cases, the wolf wheel must be a sprocket too, and multi-strand chain must serve as the 'gear teeth.'

74 An embodiment, or series of embodiments, which has, or have, a lion wheel which is a sprocket, rather than the internal gear which is presently found in one

or more of the embodiments described above. In such cases, the wolf wheel must be a spur gear.

75 A double ended embodiment, or series of double ended embodiments, which has, or have, a double-scissors levering design, rather than the straight line levering which presently exists in one or more of the embodiments described above.

76 An embodiment, or series of embodiments, which has, or have, a life lamb sprocket that cycles chain 'uphill' to relay sprockets whose shafts are fixed to posts or to matrix walls, rather than to no specific resistance source, which is presently the case in one or more of the embodiments described above.

77 An embodiment, or series of embodiments, which has, or have, a life lamb sprocket and an angel lamb sprocket that cycle chain 'uphill' to relay sprockets whose shafts are fixed to posts or matrix walls, rather than to no specific resistance source, which is presently the case in one or more of the embodiments described above.

78 An embodiment, or series of embodiments, which has, or have, lever arms which bear on fulcrum sleeves, rather than bearing directly on the angle shaft, or the god shaft, which is presently the case in one or more of the embodiments described above.

79 An embodiment, or series of embodiments, which has, or have, a class two long lever system rather than the class one long lever system which is presently the case in one or more of the embodiments described above.

80 An embodiment, or series of embodiments, which has, or have, a class two and class one long lever system, whose arms are joined at both ends, rather than the class one long lever system which is presently the case in one or more of the embodiments described above.

81 An embodiment, or series of embodiments, which has, or have, cross brace relay sprockets sets which are placed horizontally/parallel to the lever arms, rather than vertically, which is presently the case in one or more of the embodiments described above.

82 An embodiment, or series of embodiments, which has, or have, non-skid belting being used in place of sprocket chain (in which case sheaves must be used instead of sprockets), rather than sprocket chain, which is presently the case in one or more of the embodiments described above.

83 An embodiment, or series of embodiments, which has, or have, fewer cycling sprockets, yet still technically enough, than are presently being used.

84 An embodiment, or series of embodiments, which has, or have, more cycling sprockets, than are presently being used.

85 An embodiment, or series of embodiments, which has, or have, moon sprockets which serve as anchor discs for internal gear sun wheels.

86 An embodiment, or series of embodiments, which has, or have, moon sprockets which serve as anchor discs for adjoining sun sprockets, which are separated sufficiently by spacer washers to allow enough room for sprocket chain engage them individually without risk of impeding the freeway of another chain.

87 An embodiment, or series of embodiments, which has, or have, non-moon sprockets which serve as anchor discs for internal gear lion wheels.

88 An embodiment, or series of embodiments, which has, or have, non-moon sprockets which serve as anchor discs for adjoining other sprockets, which are separated sufficiently by spacer washers to allow enough room for sprocket chain engage them individually without risk of impeding the freeway of another chain.

89 An embodiment, or series of embodiments, which has, or have, a gear placed on its sending shepherd shaft, and a pinion on its work shaft, rather than sprockets and chain or sheaves and belting, which is presently the case in one or more of the embodiments described above.

90 An embodiment, or series of embodiments, which has, or have, a sprocket on its life shaft which cycles chain to the planet comets from its pro rim, and cycles chain to a shepherd sprocket from its contra rim; rather than using a separate life comet sprocket to cycle chain to the planet comet sprocket, and a separate life lamb comet to cycle chain to the shepherd sprocket, which is presently the case in one or more of the embodiments described above which use a comet-to-comet feedback device.

91 An embodiment, or series of embodiments, which has, or have matrix walls as shaft support members rather than posts as such members, which is presently the case in one or more of the embodiments described above.

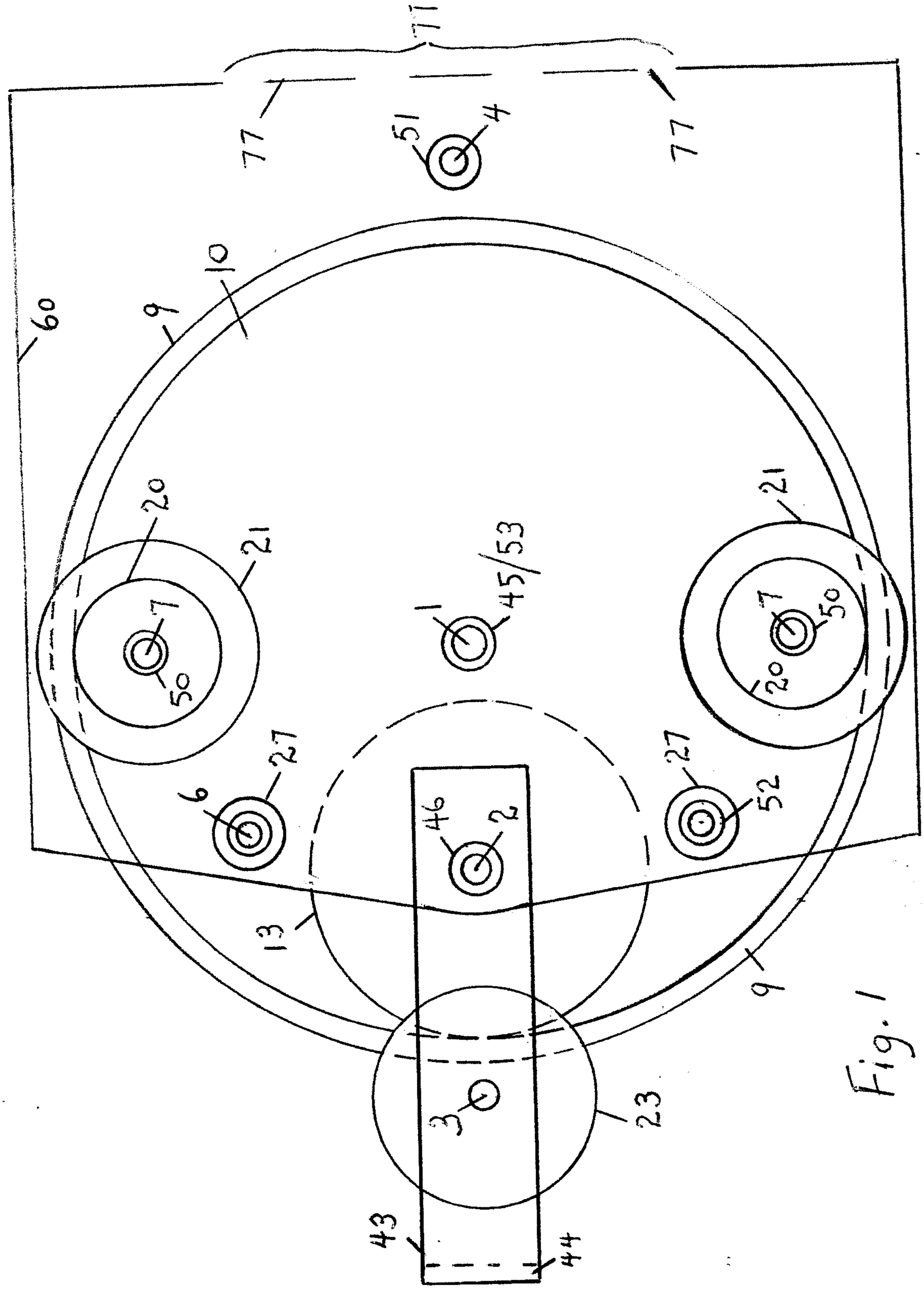
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Fig. 1

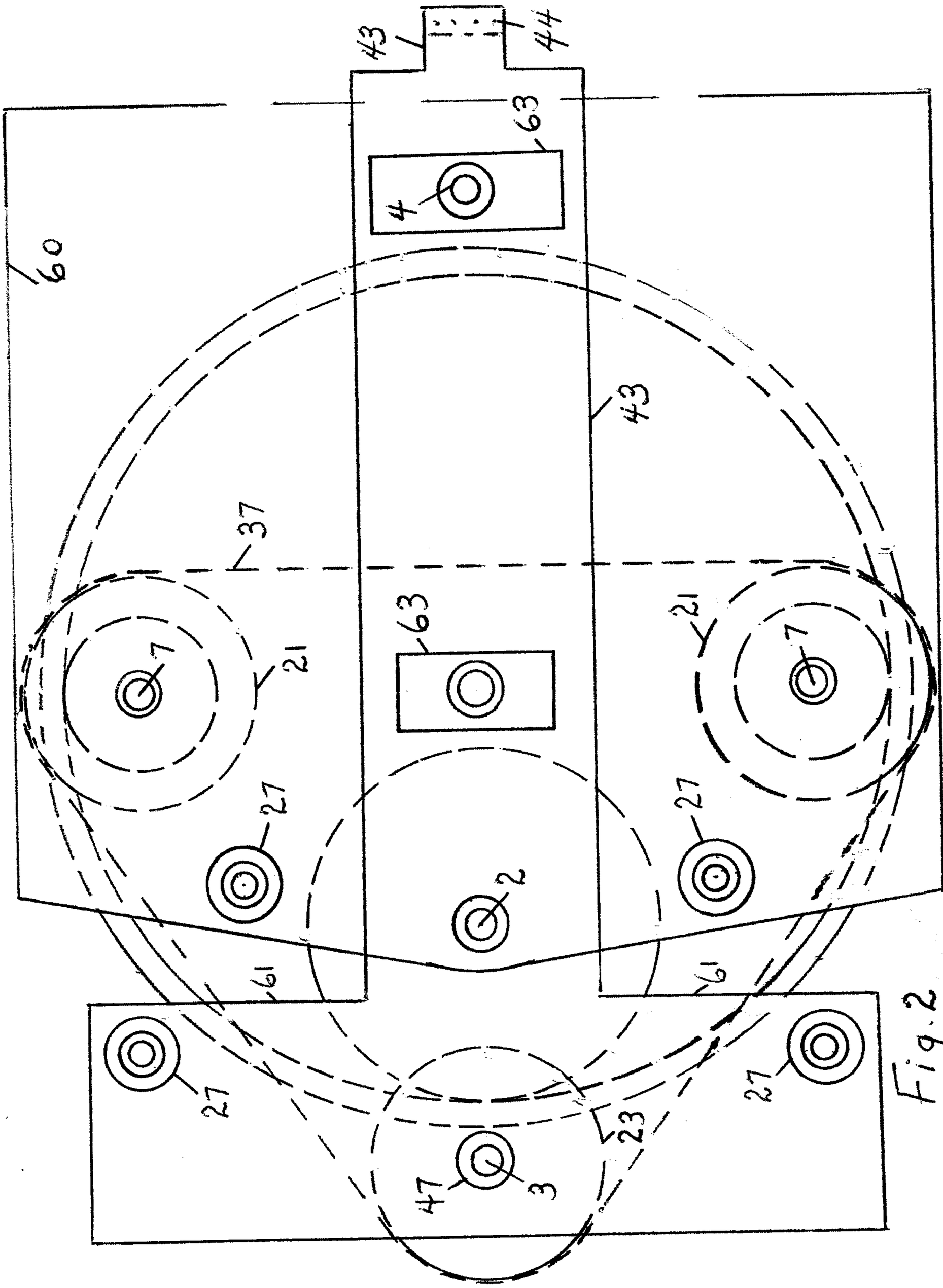

Fig.2

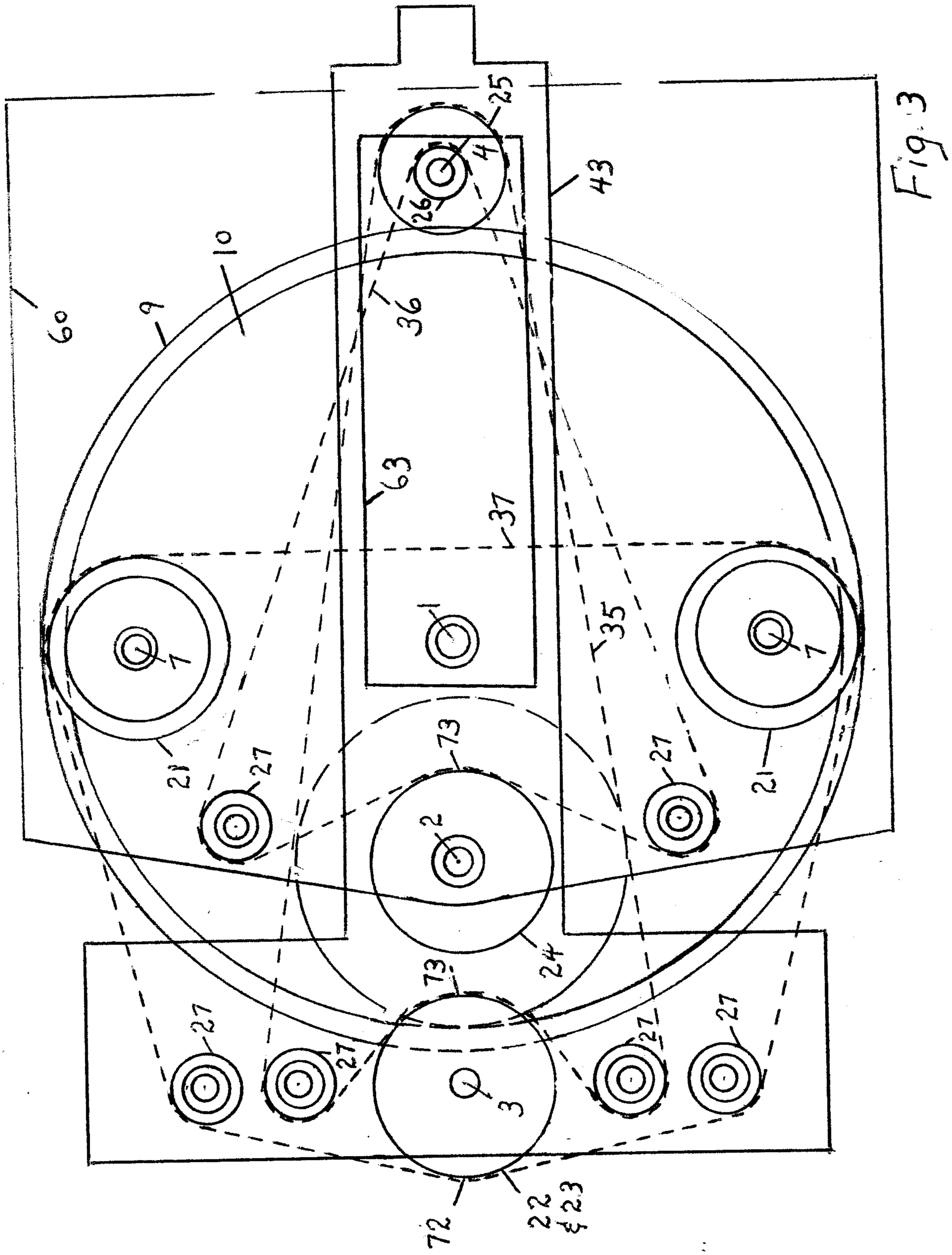

Fig. 3

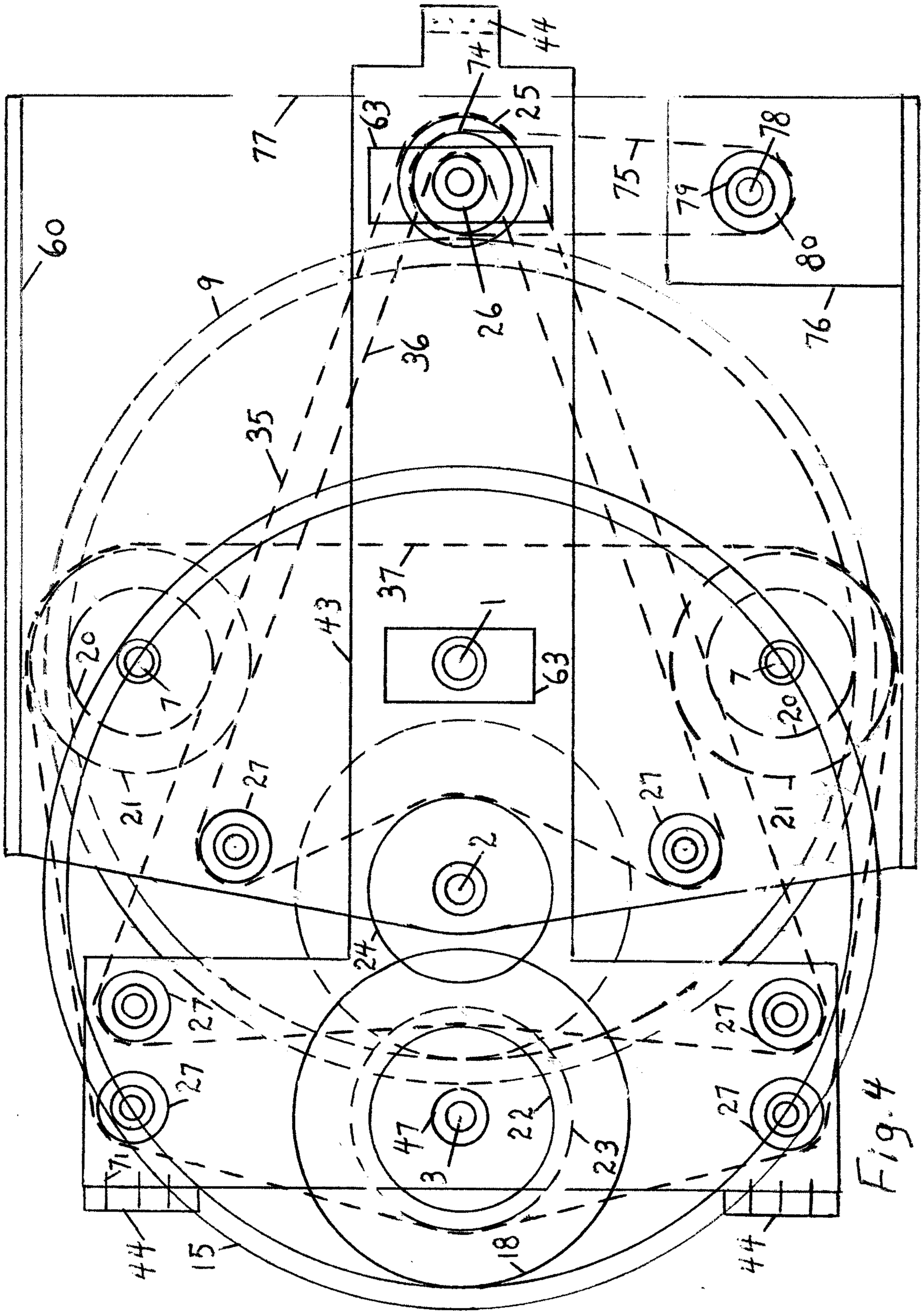
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Fig. 4

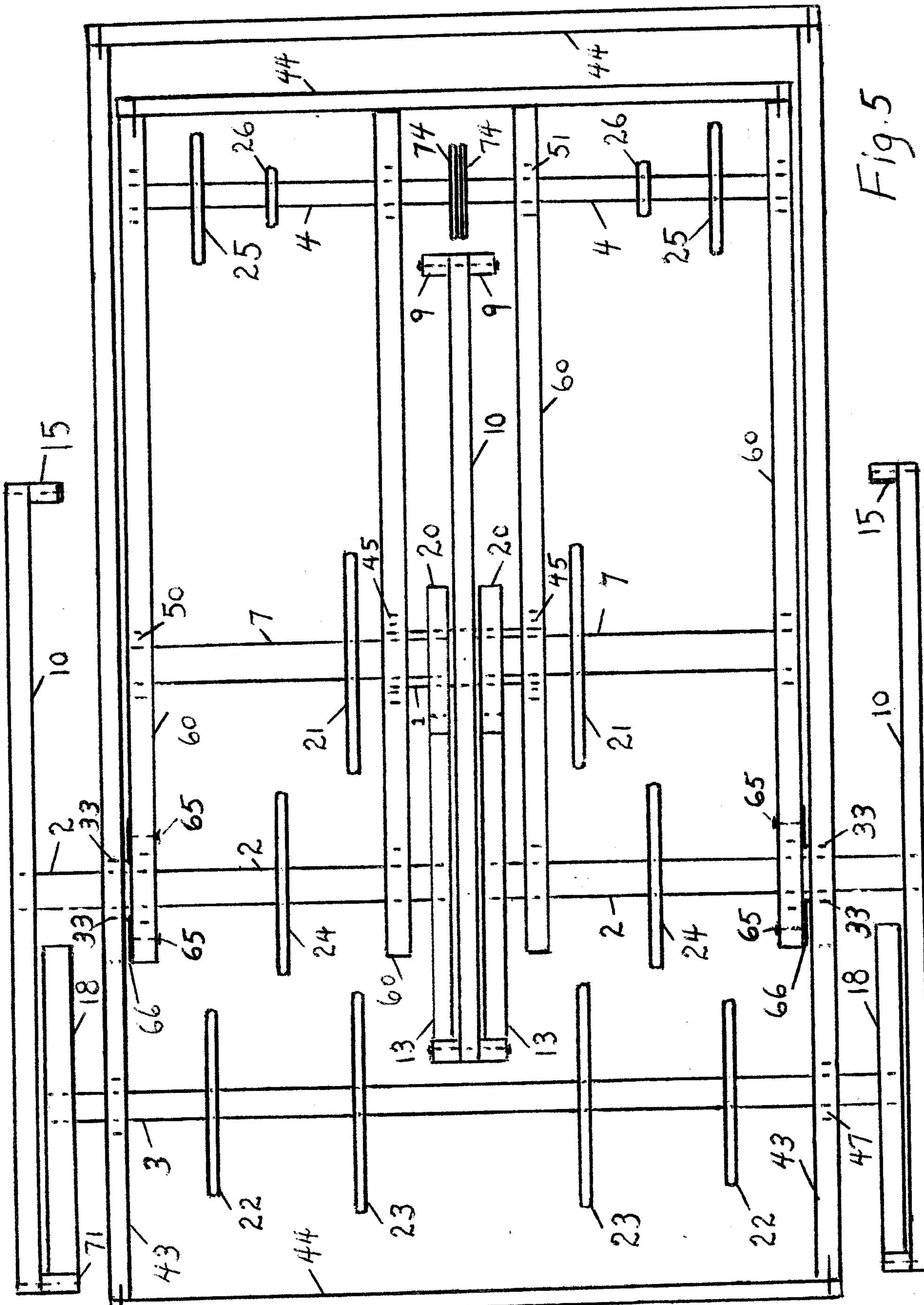
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Fig.5

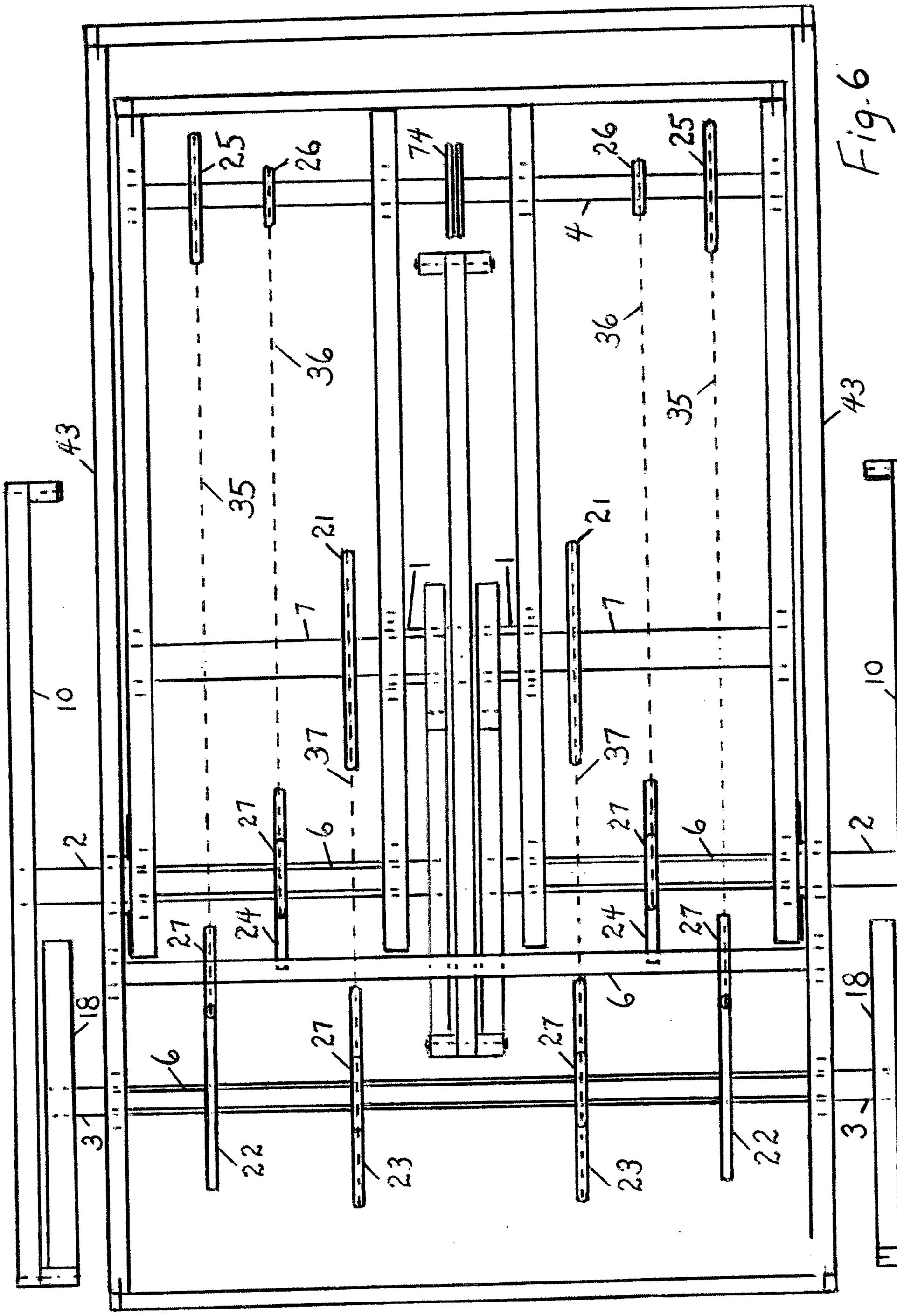

Fig. 6

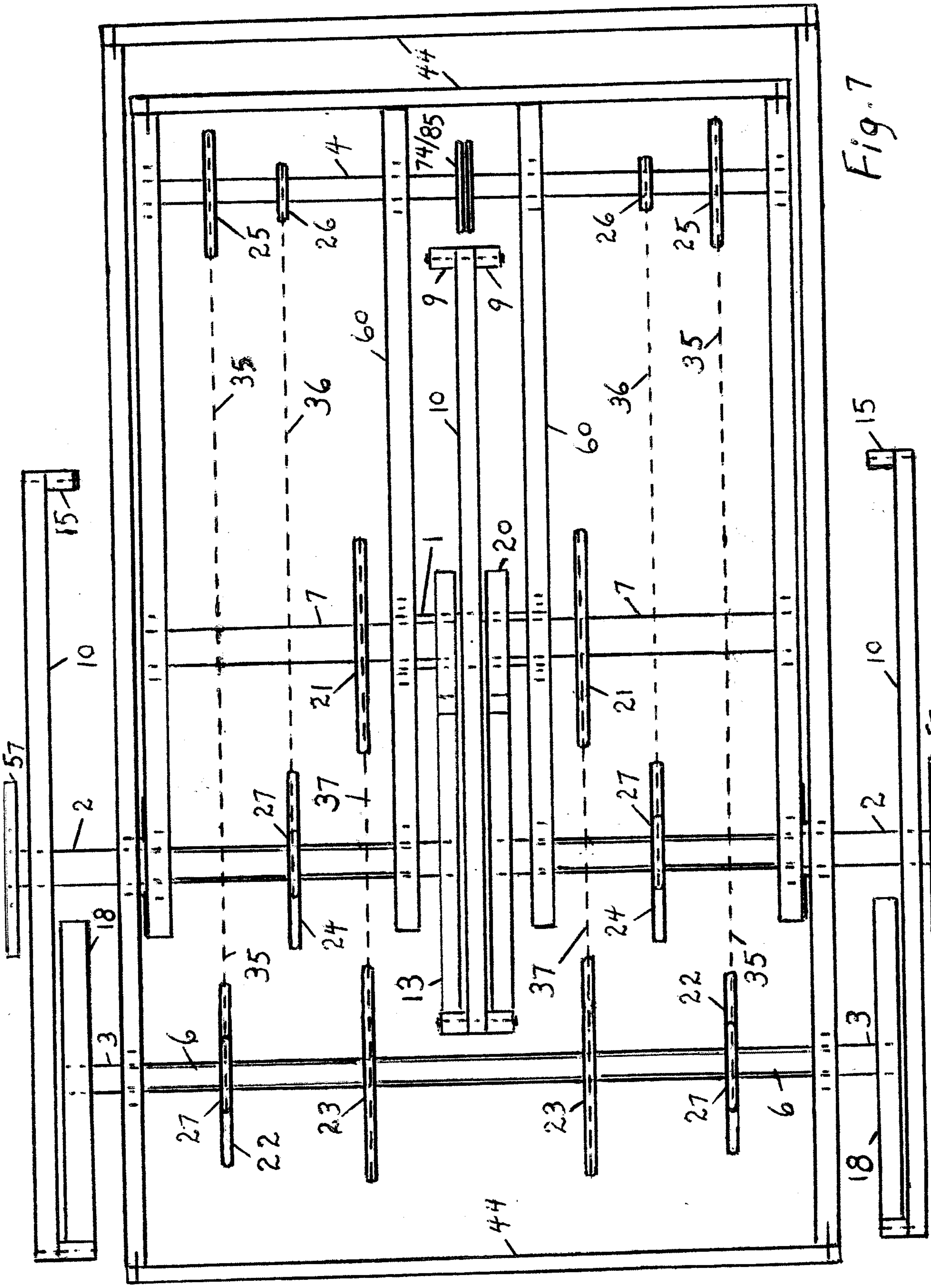

Fig. 7

Fig. 8

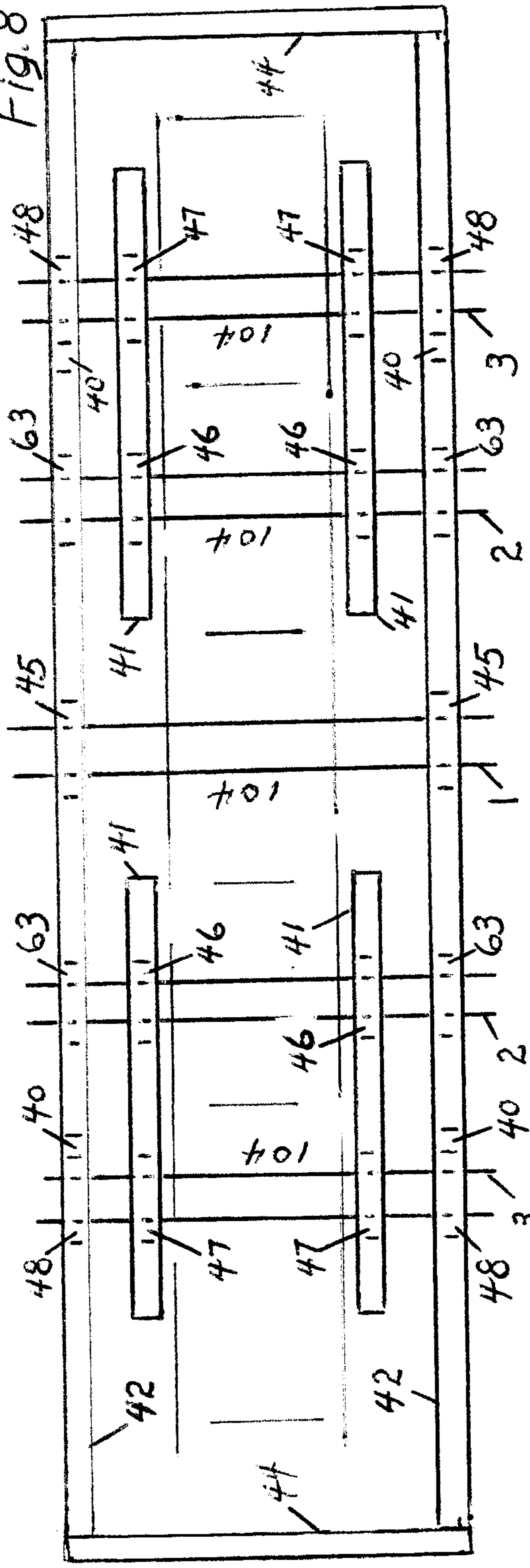
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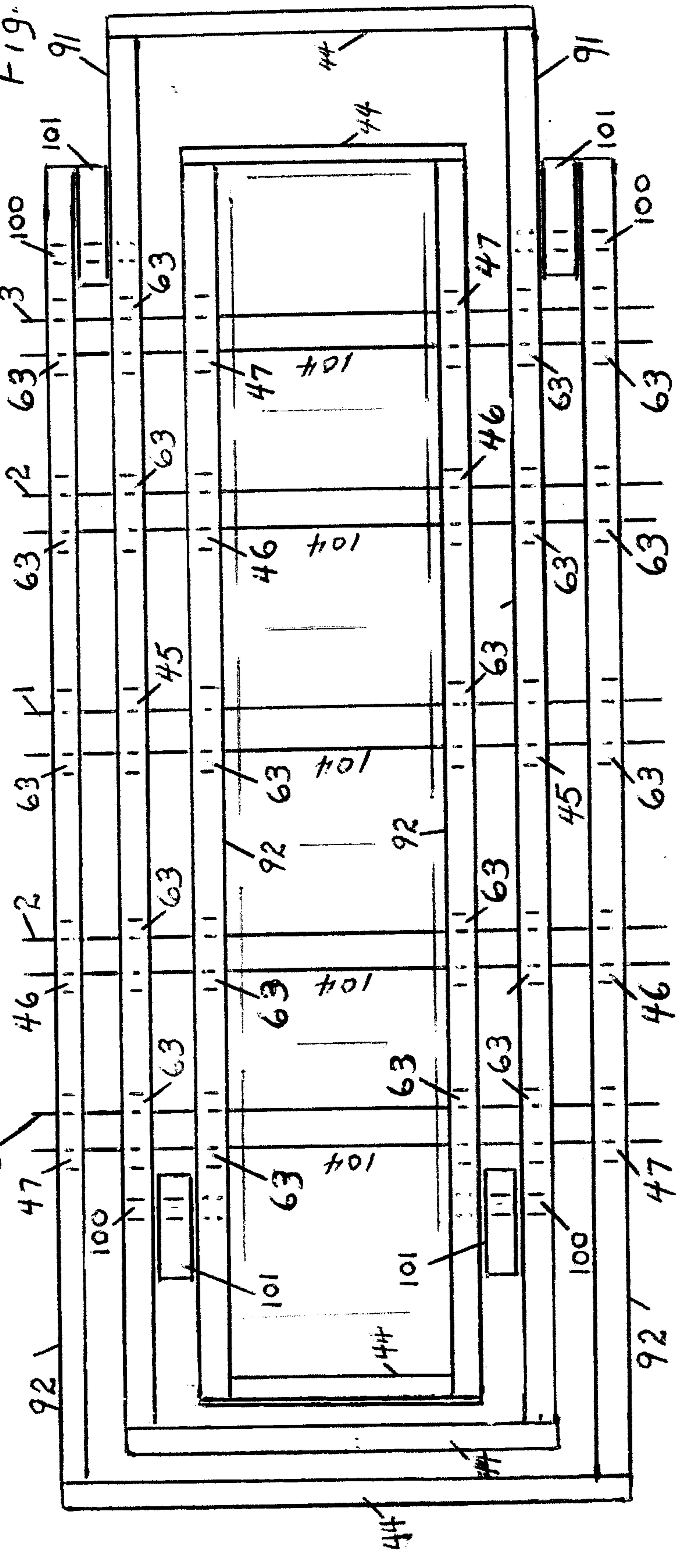
Fig. 9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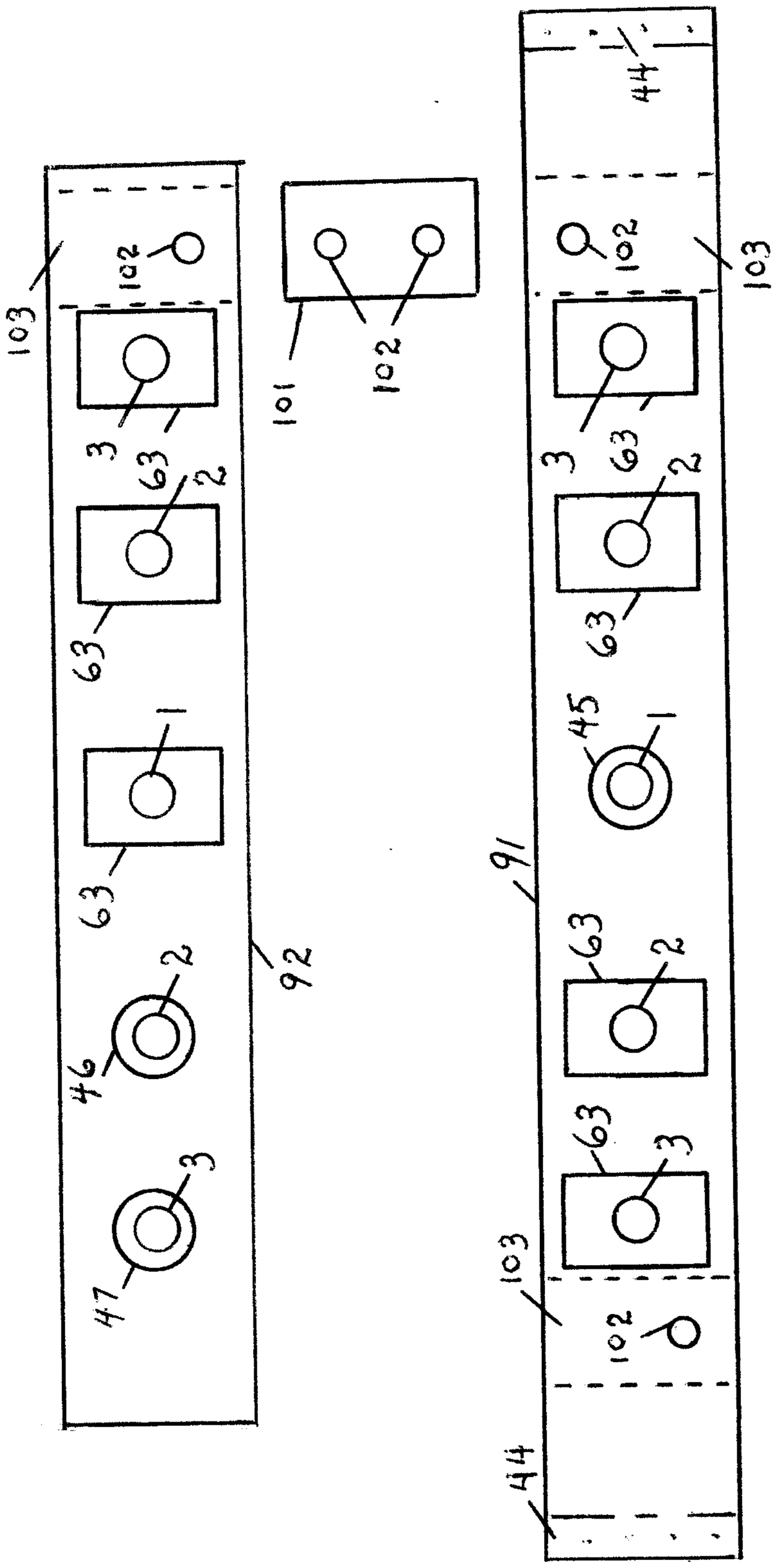
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103
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102
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101

Fig. 10

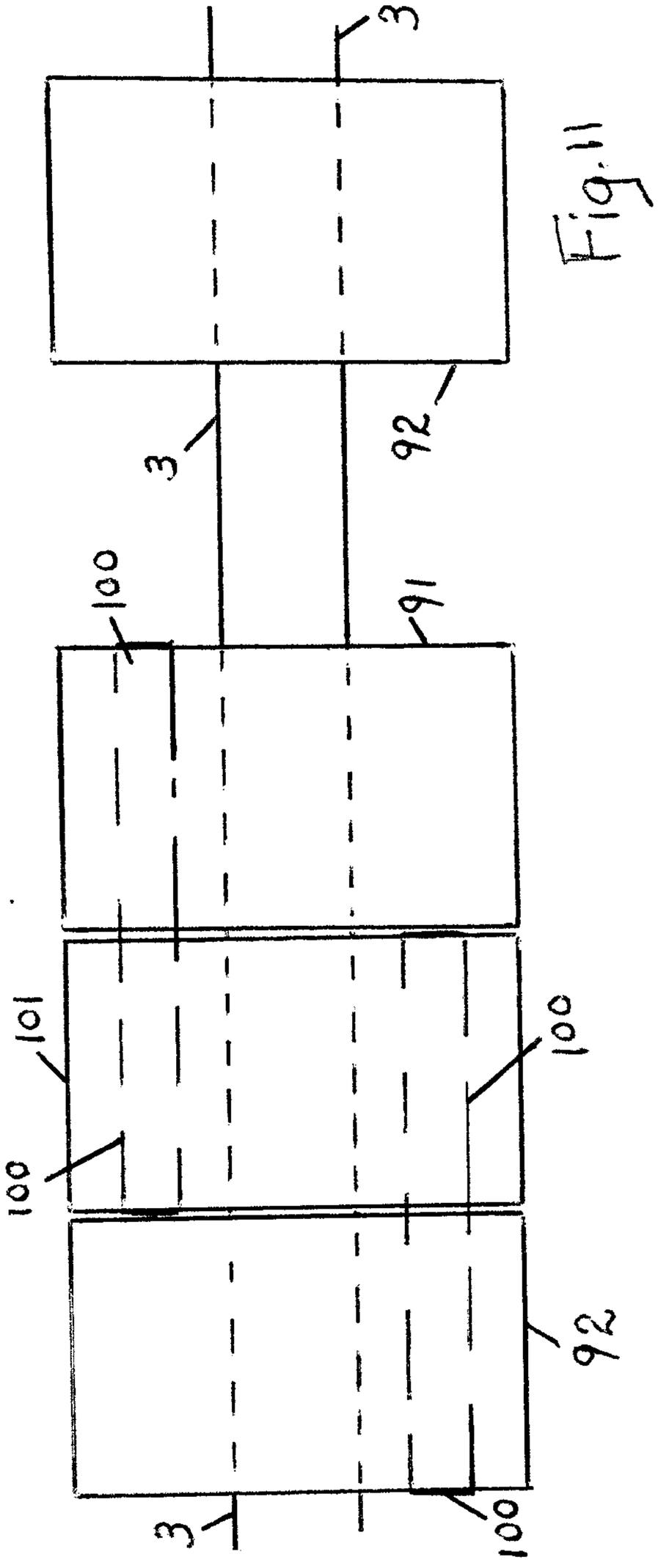
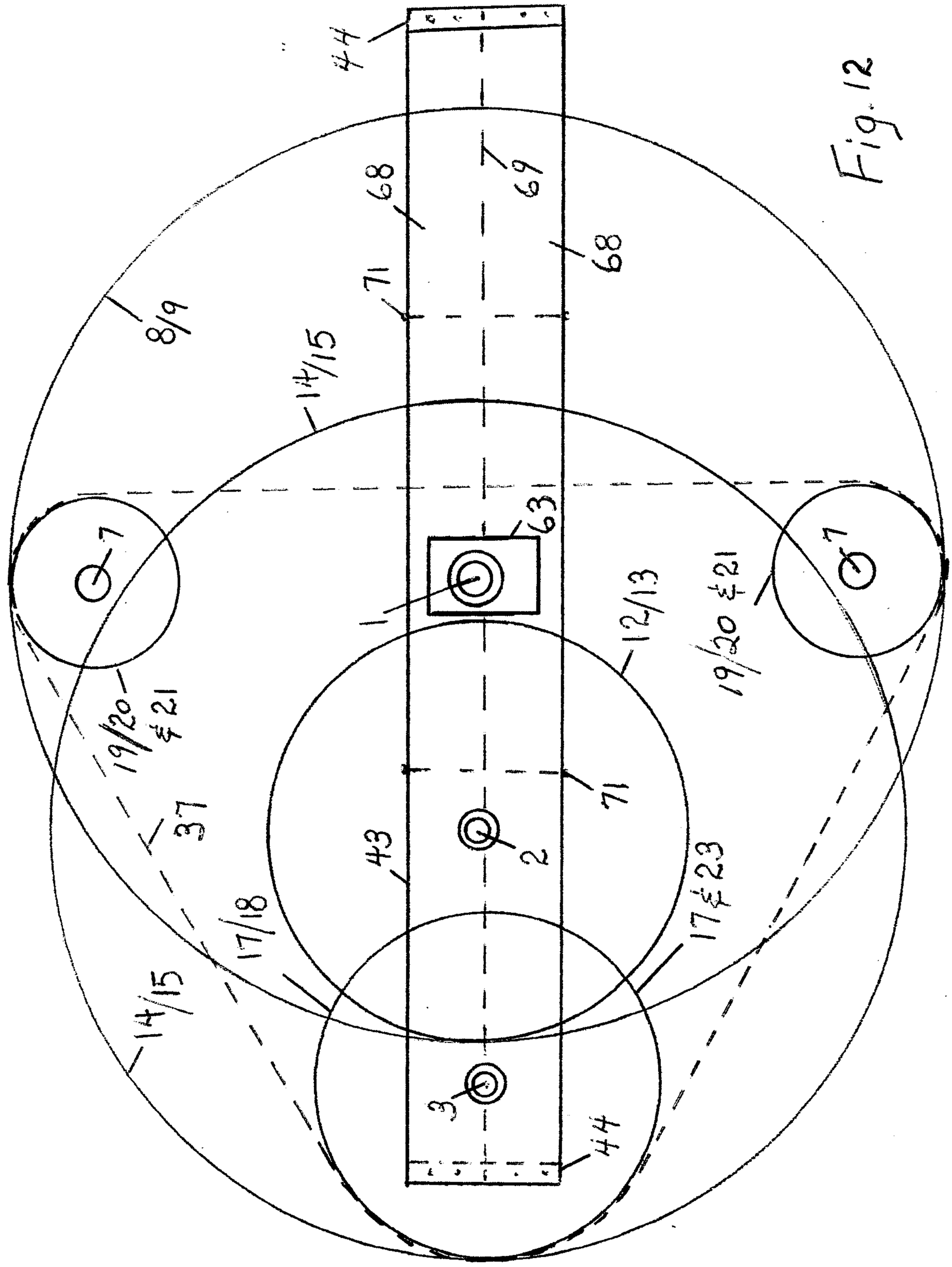


Fig. 11


44
68
69
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63
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7
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Fig. 12

Fig. 13

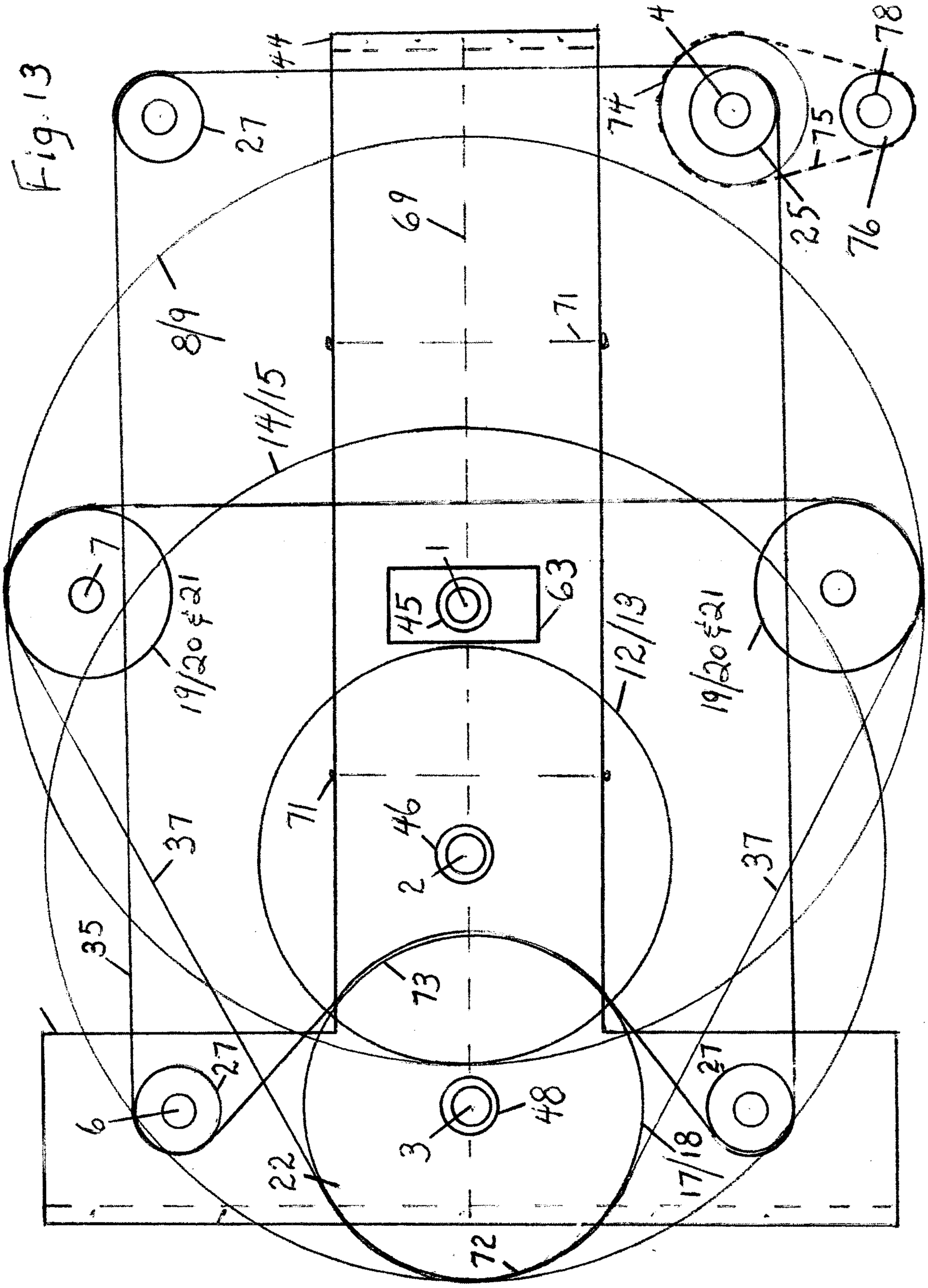
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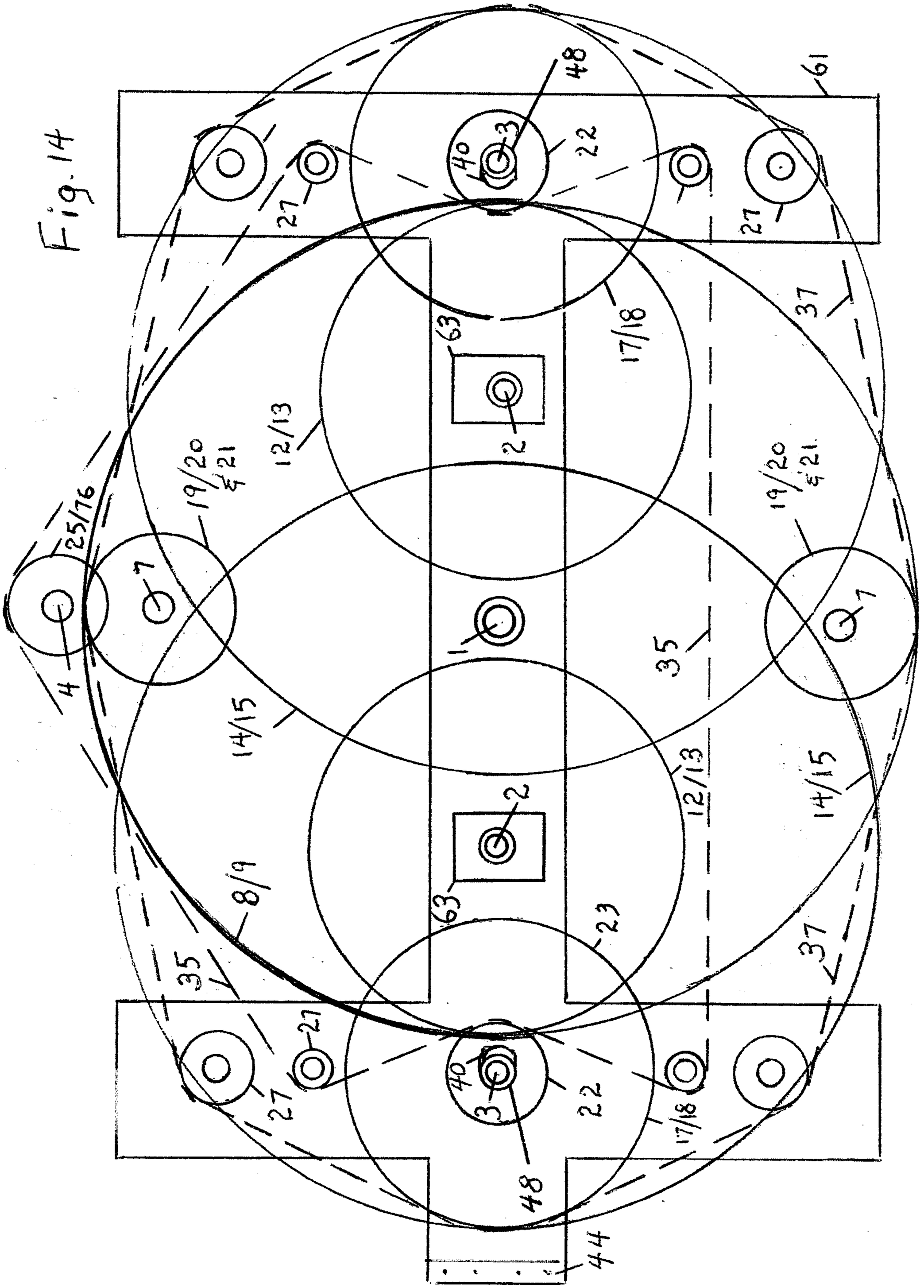
Fig. 14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61
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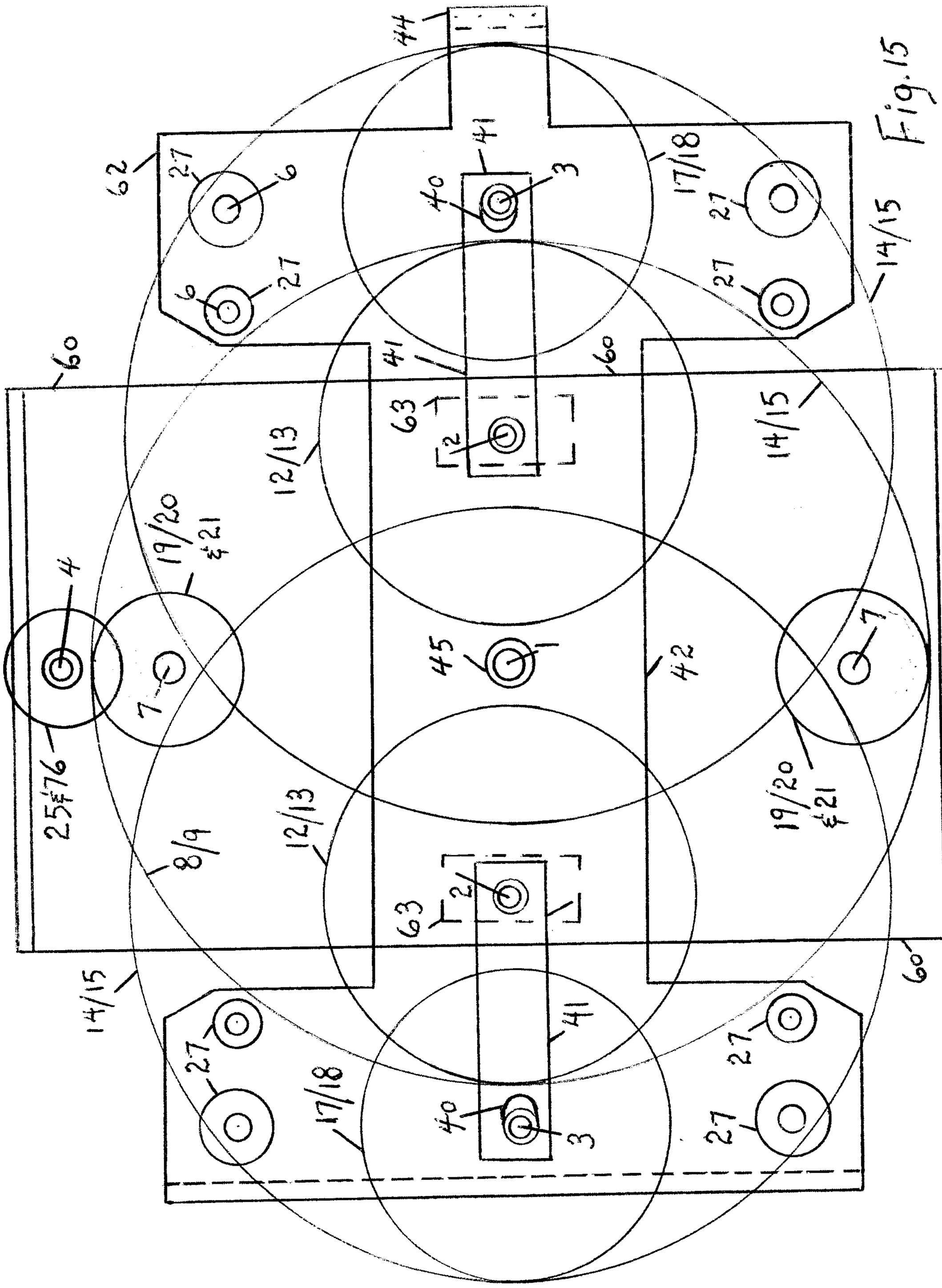
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Fig. 15

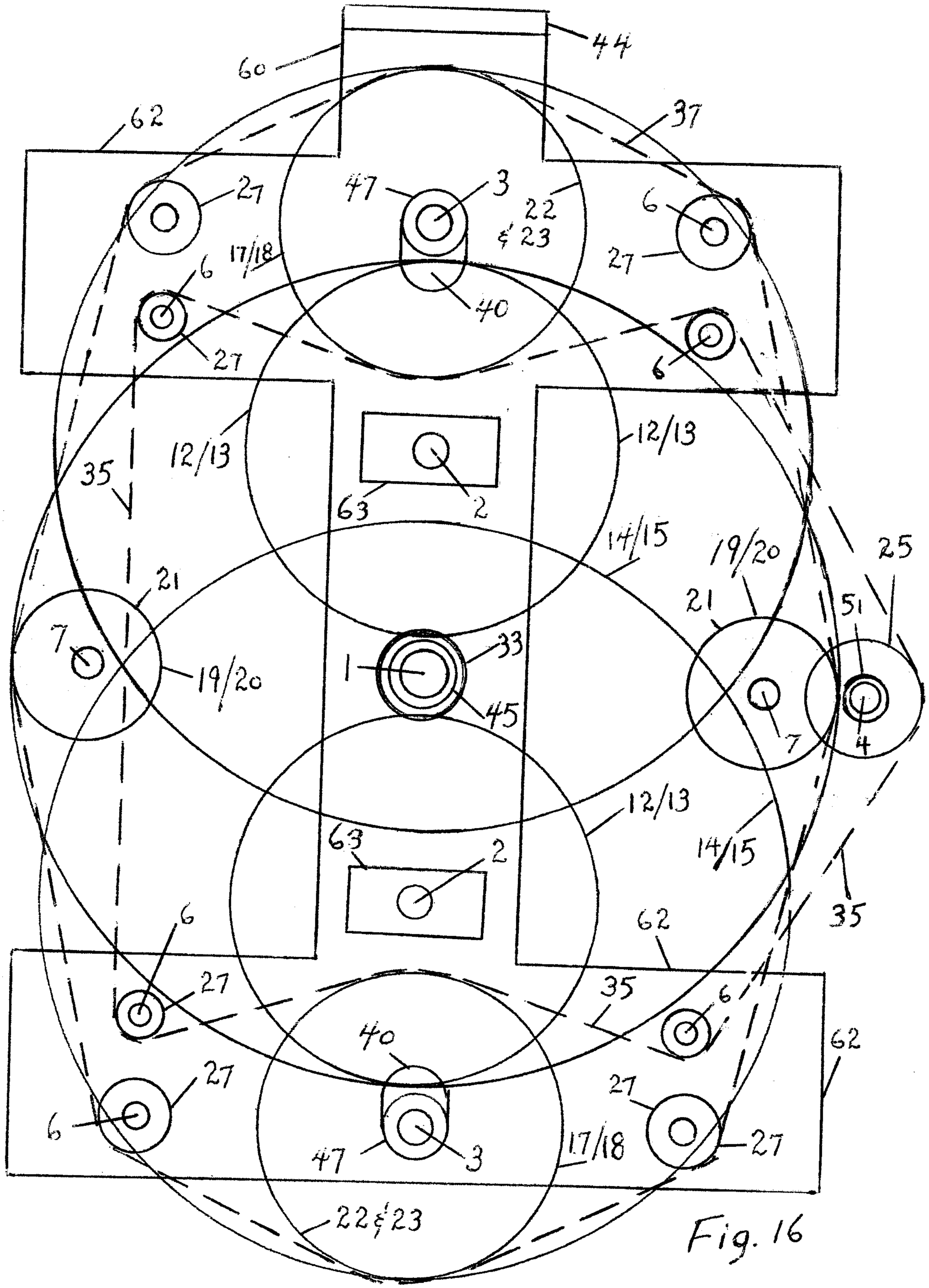
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Fig. 16

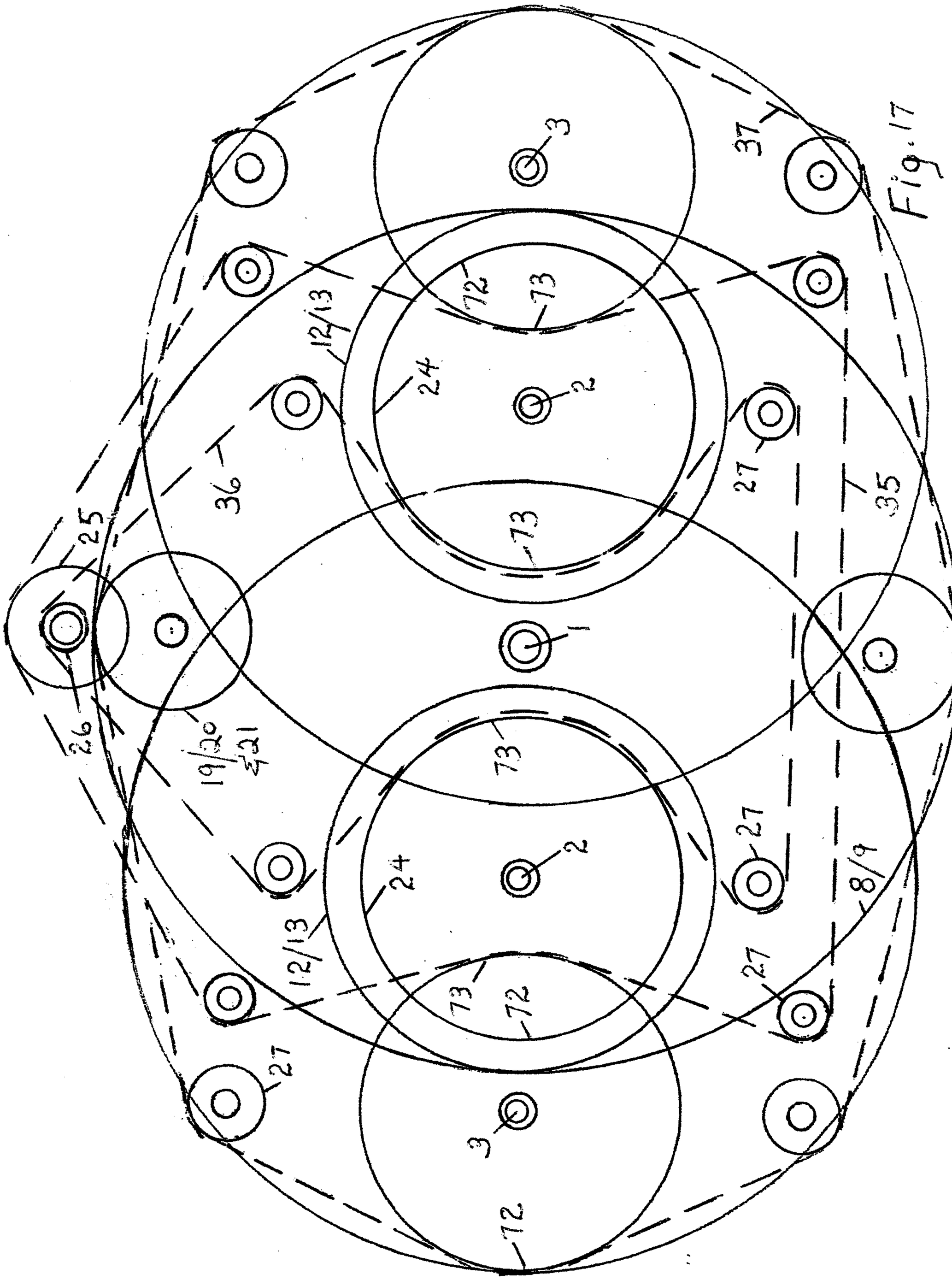
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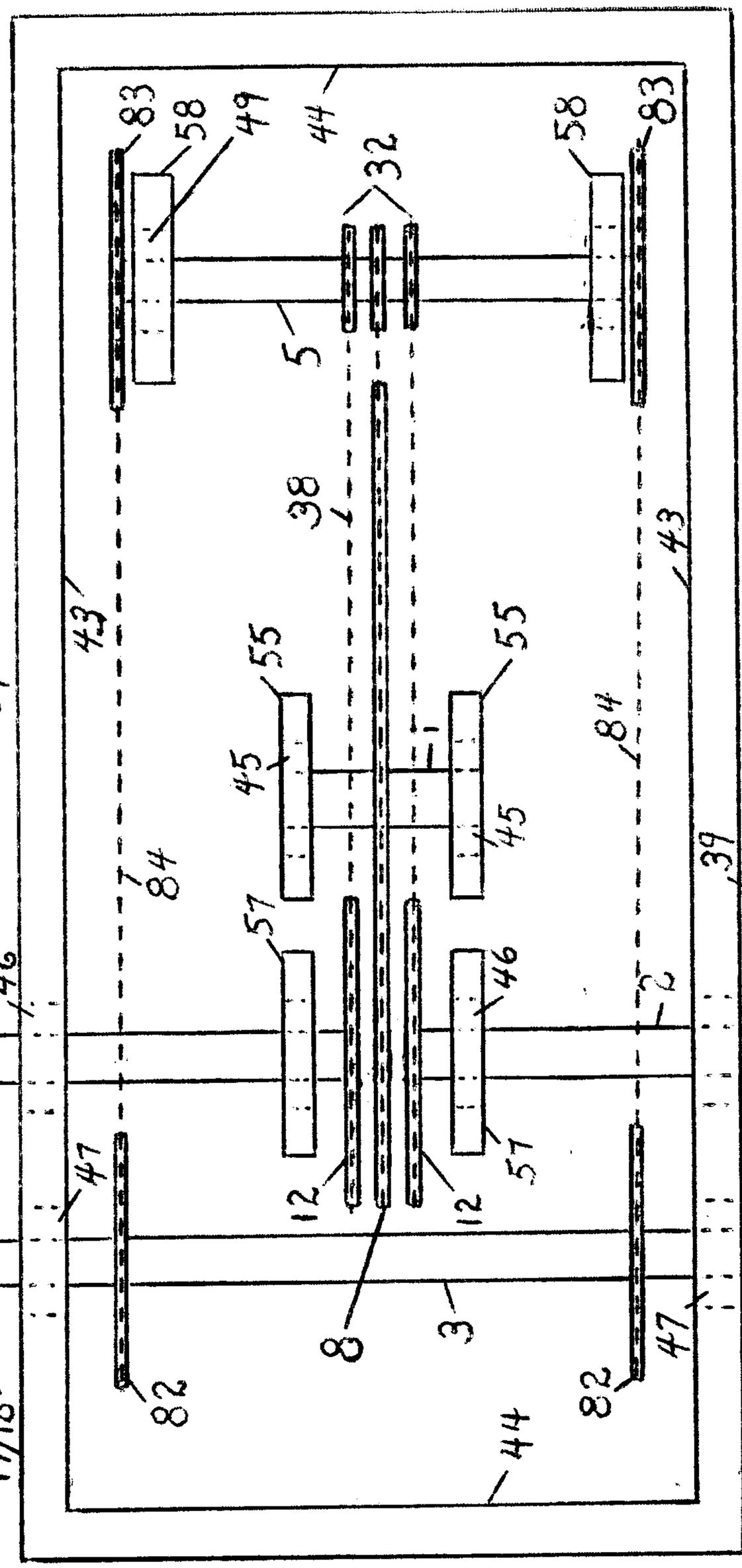
Fig. 17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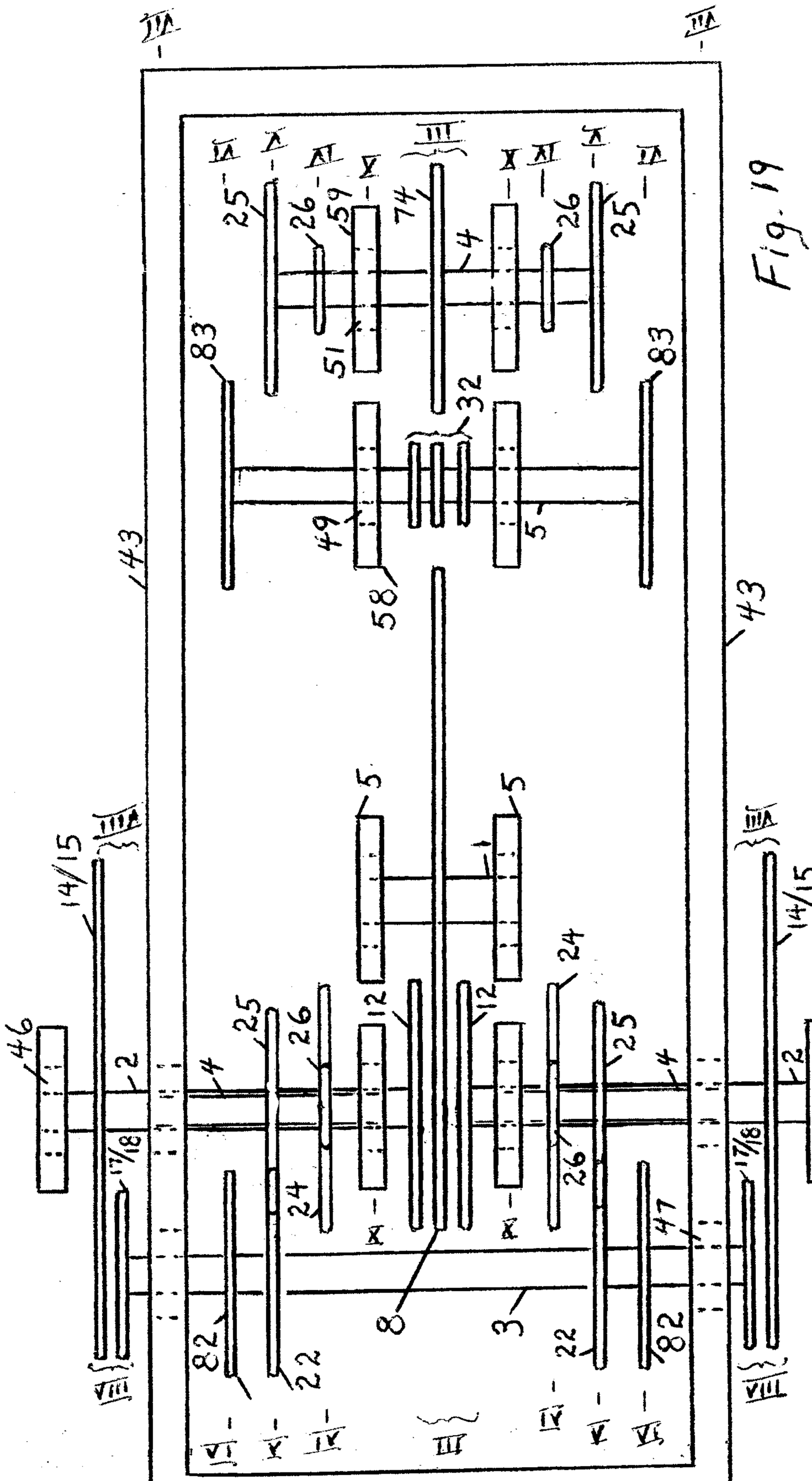
81/71

Fig. 18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I A
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I A
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43
III A
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17/18
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VI A
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XI
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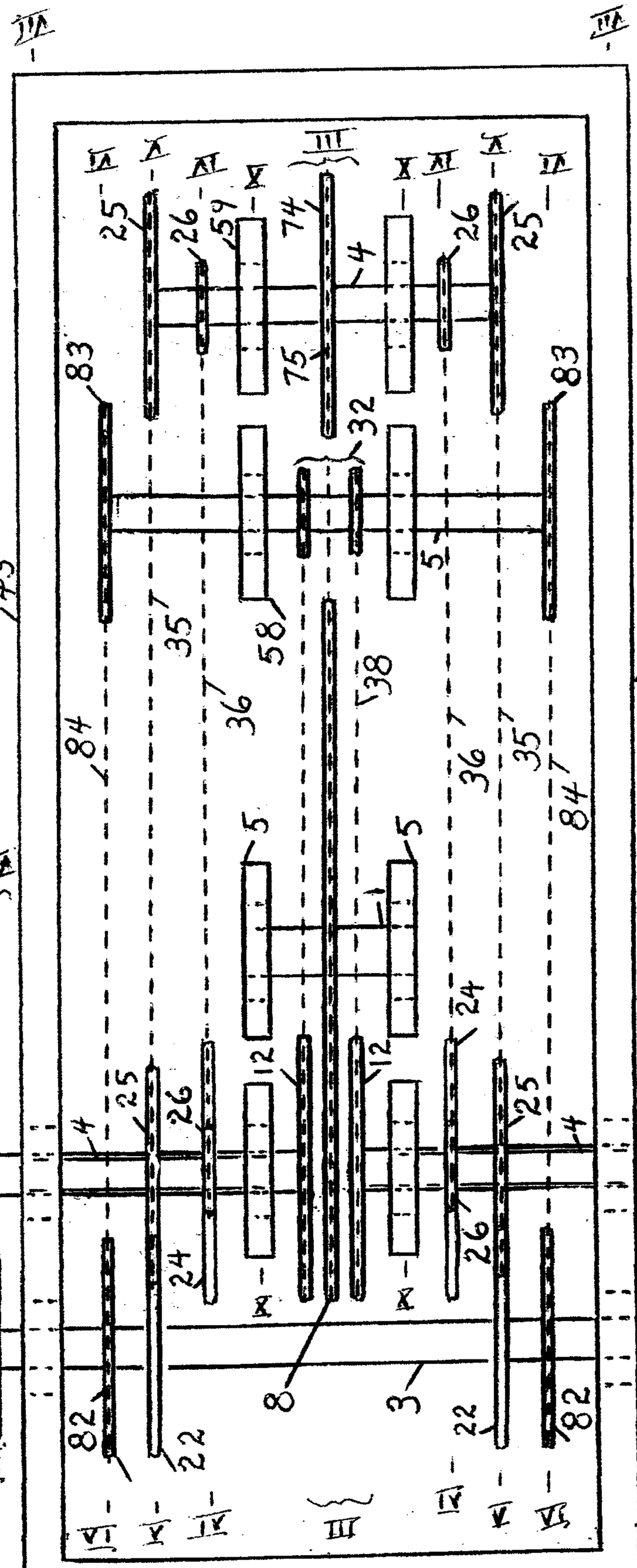
Fig. 19


IIIA
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IIIA
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IIIA
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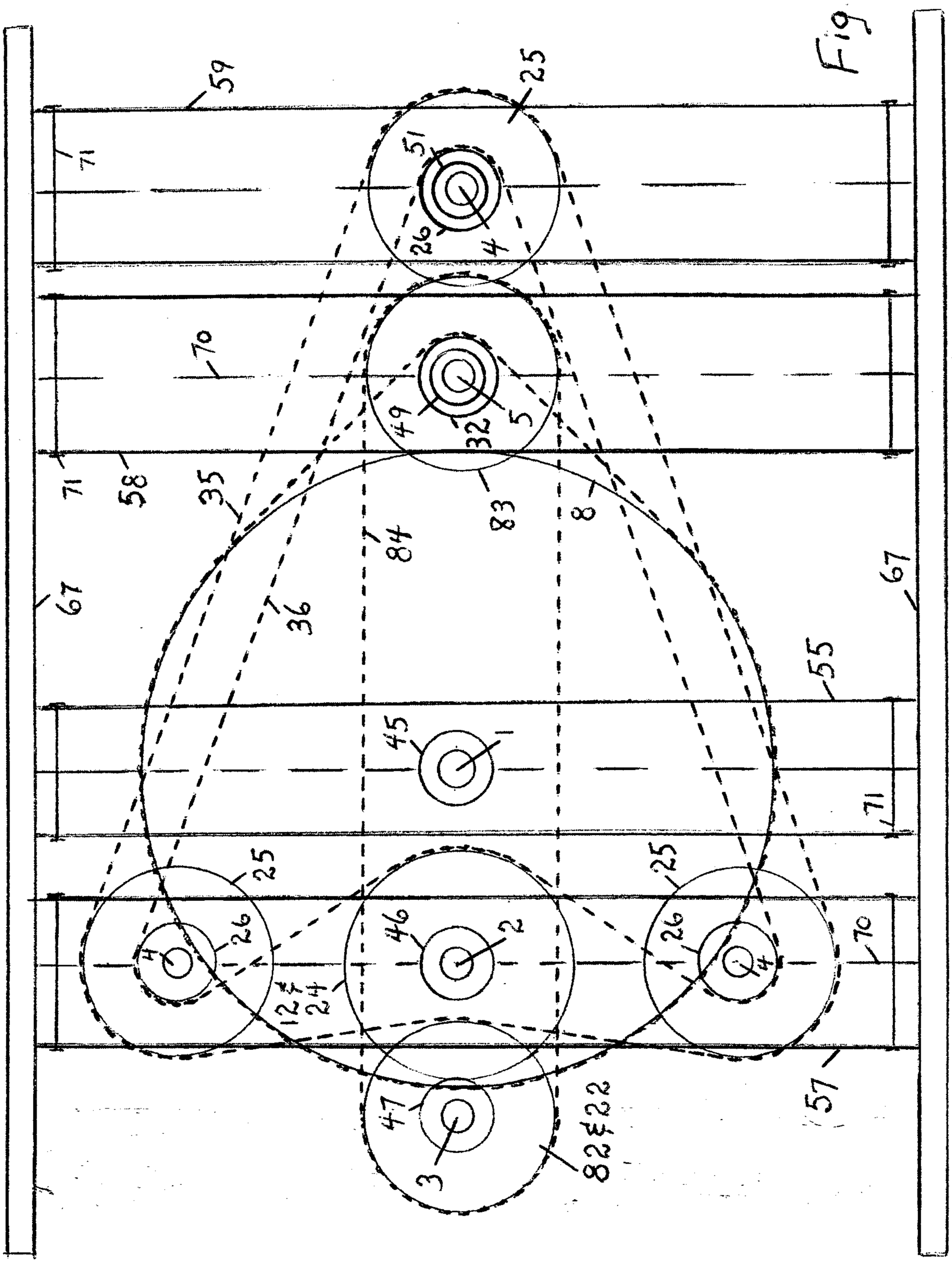
Fig. 20

Fig 21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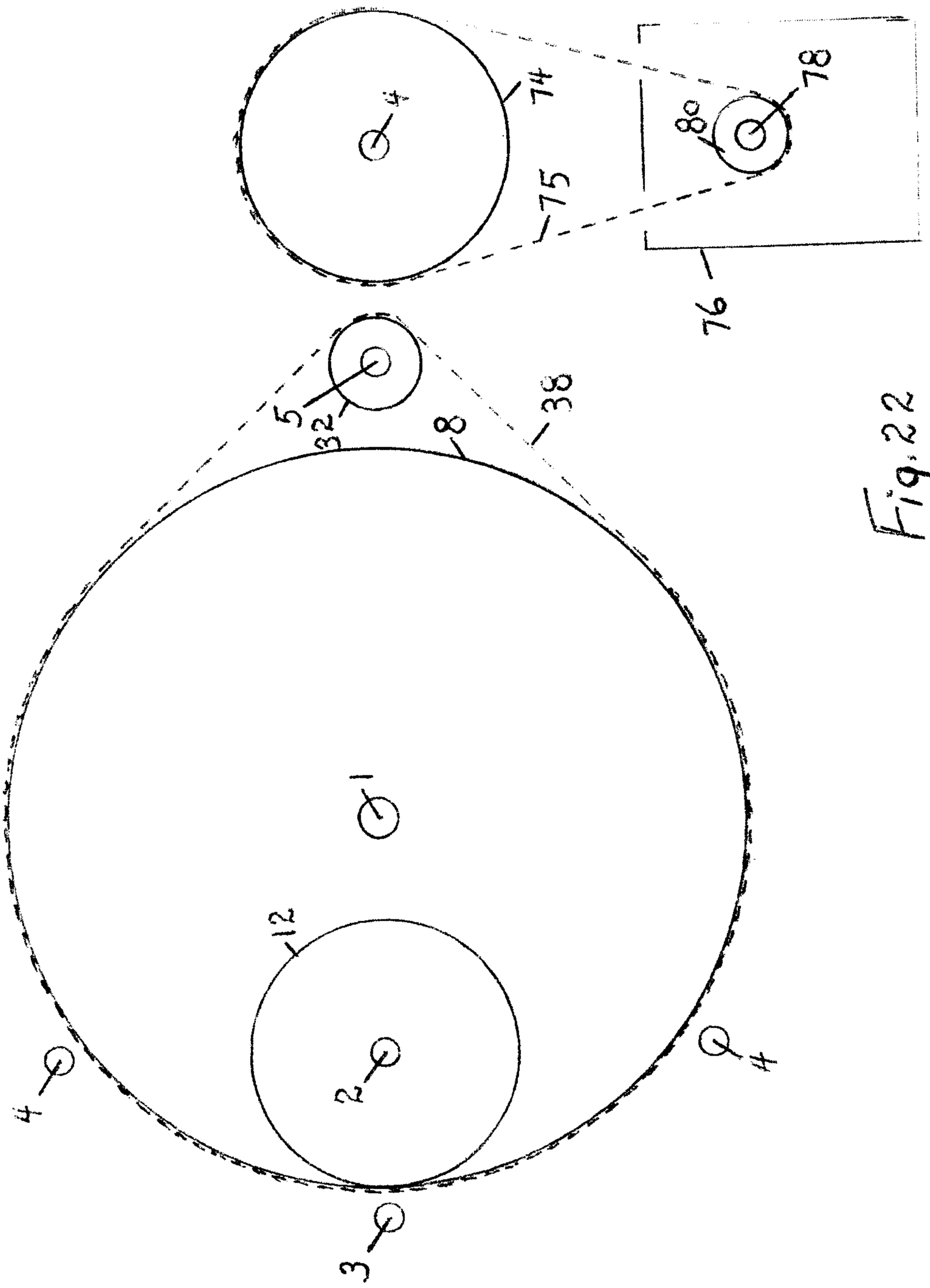

Fig. 22

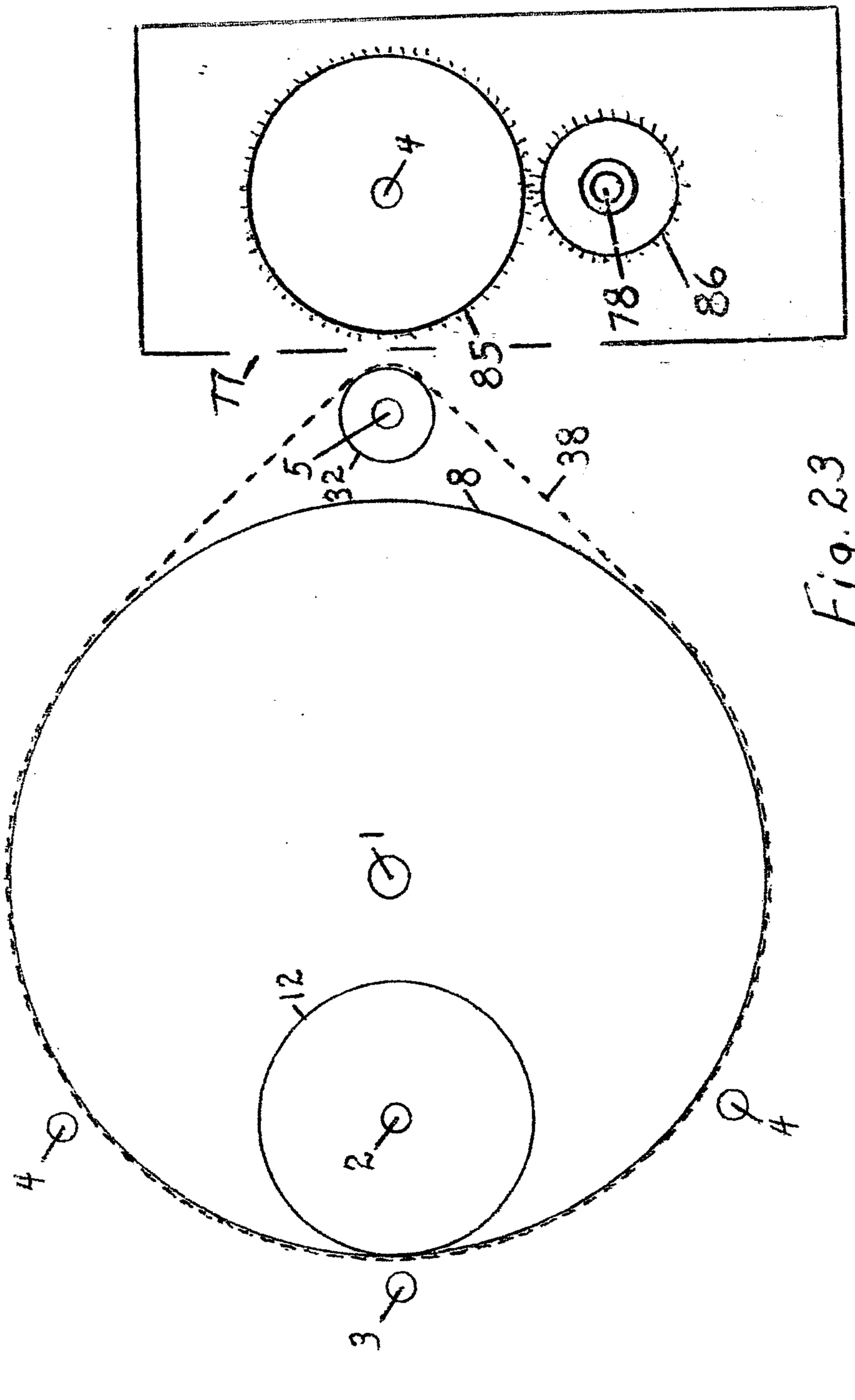

Fig. 23

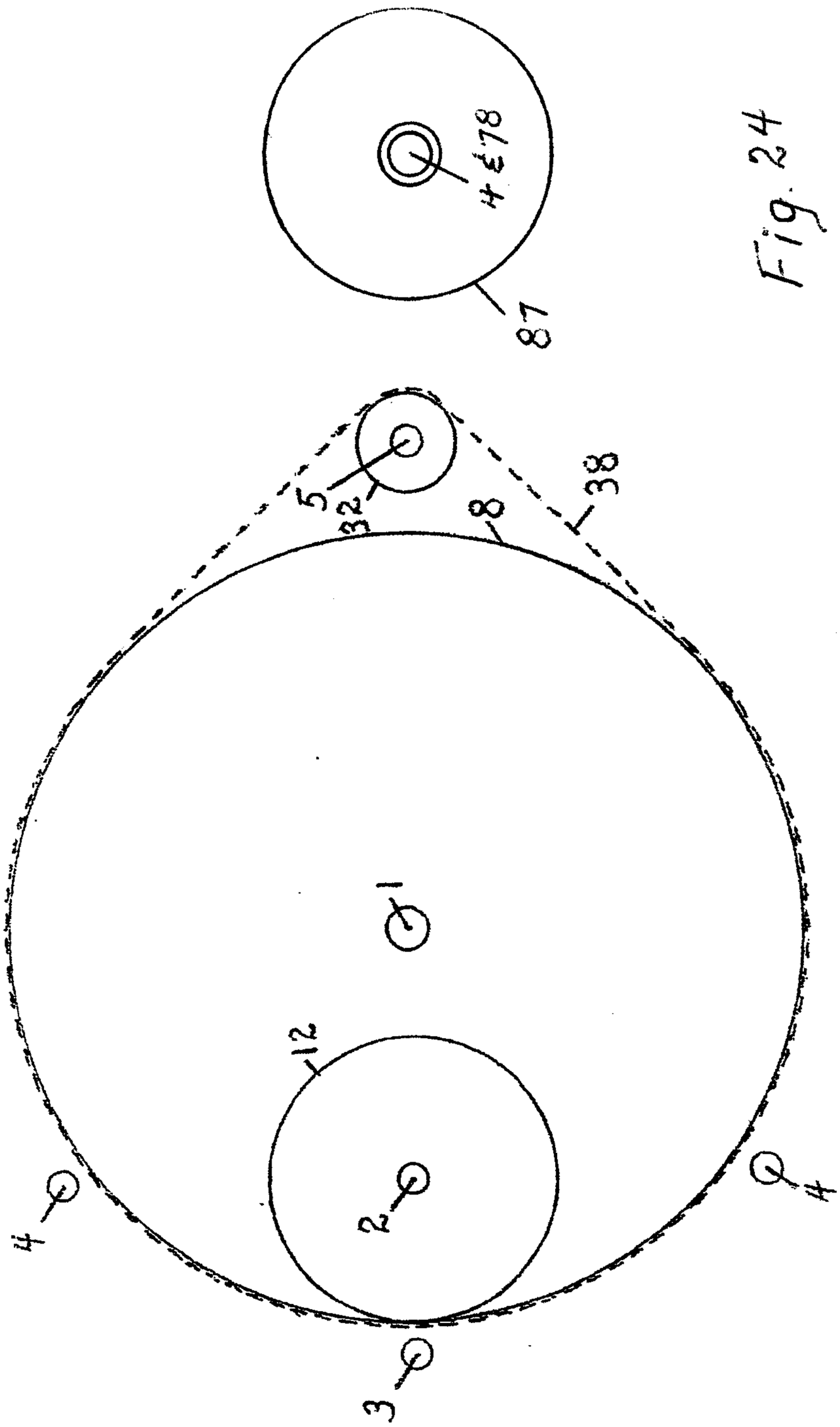

Fig. 24

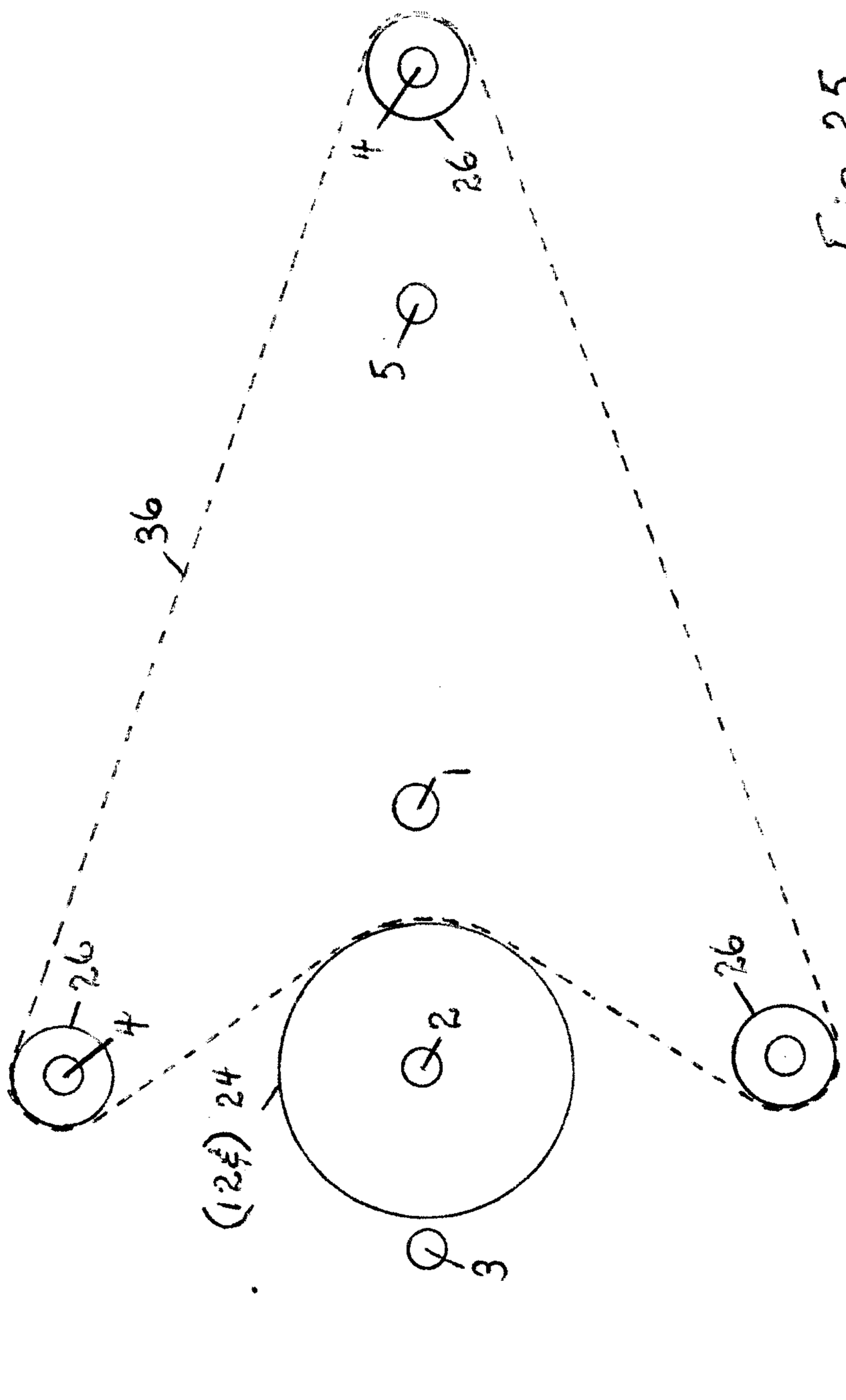

Fig. 25

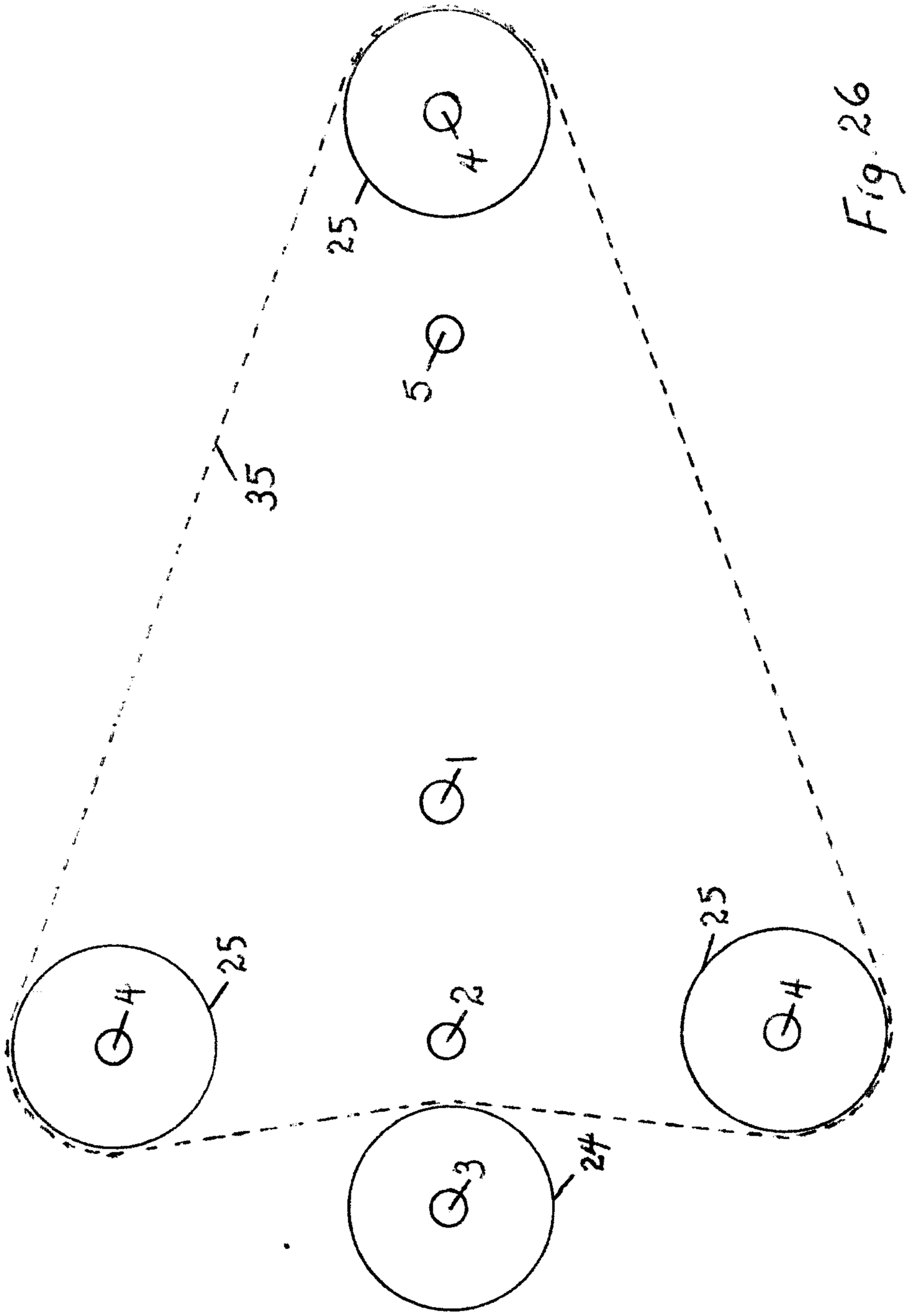

Fig. 26

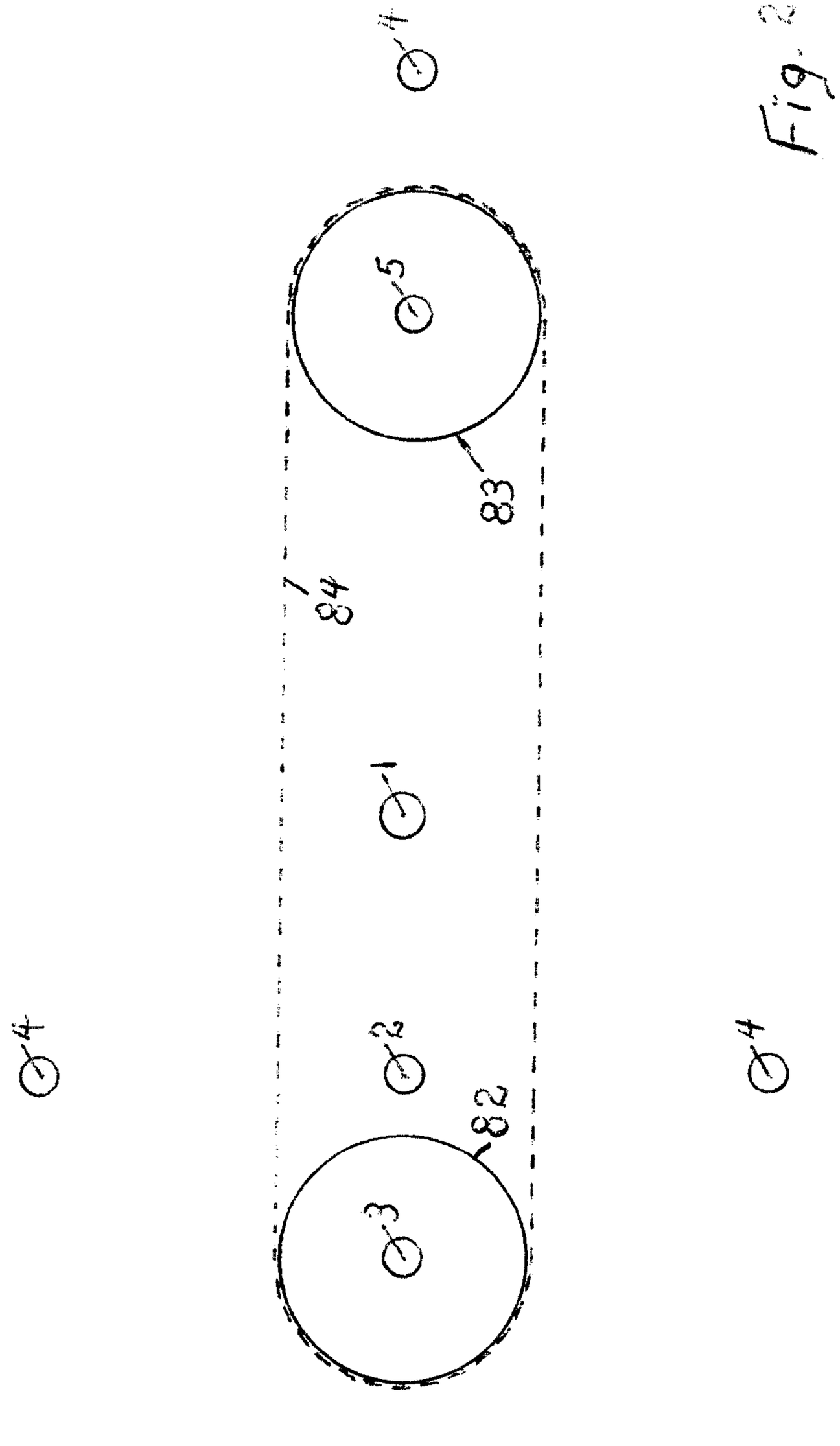
Fig. 2A
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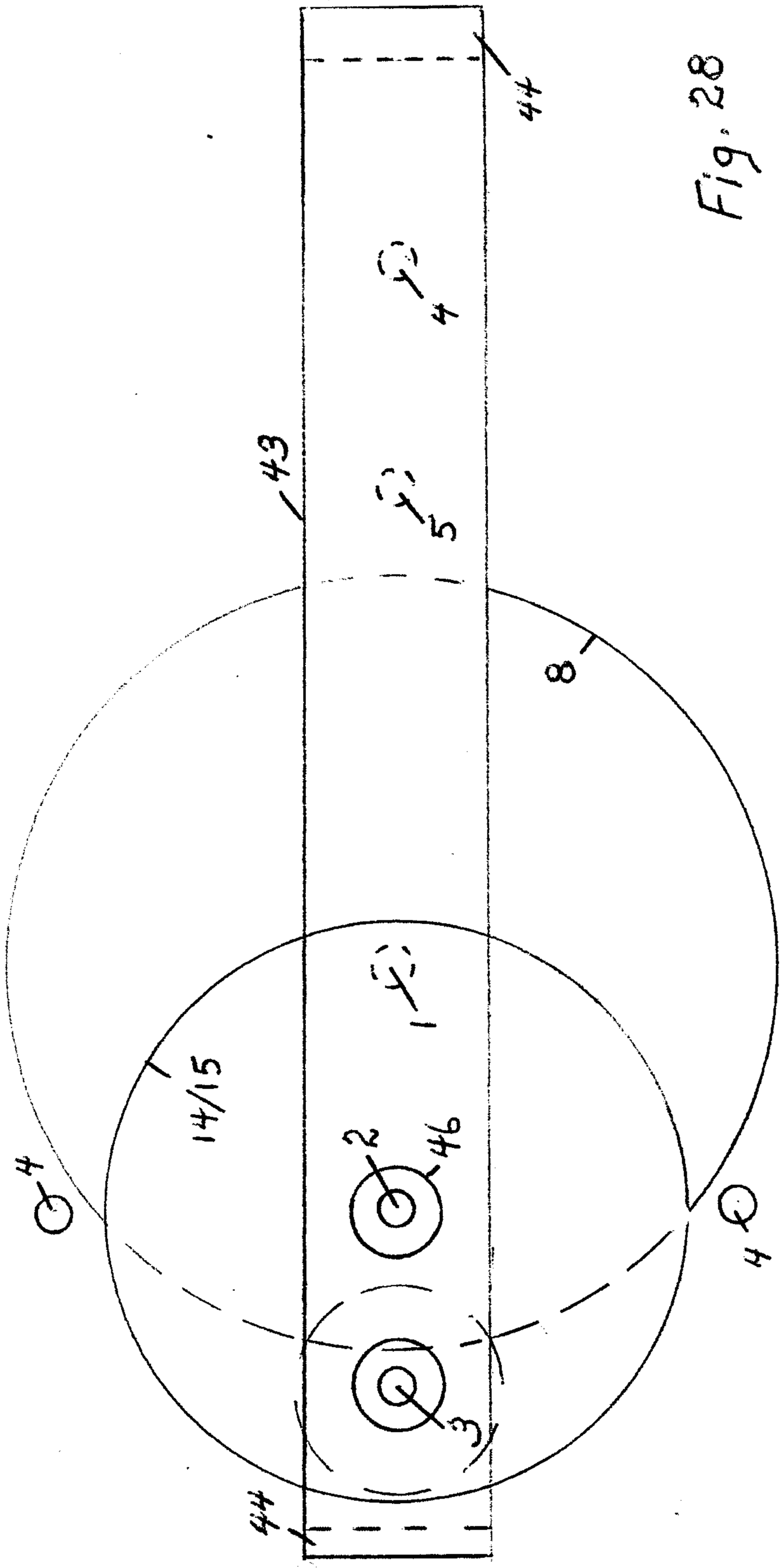
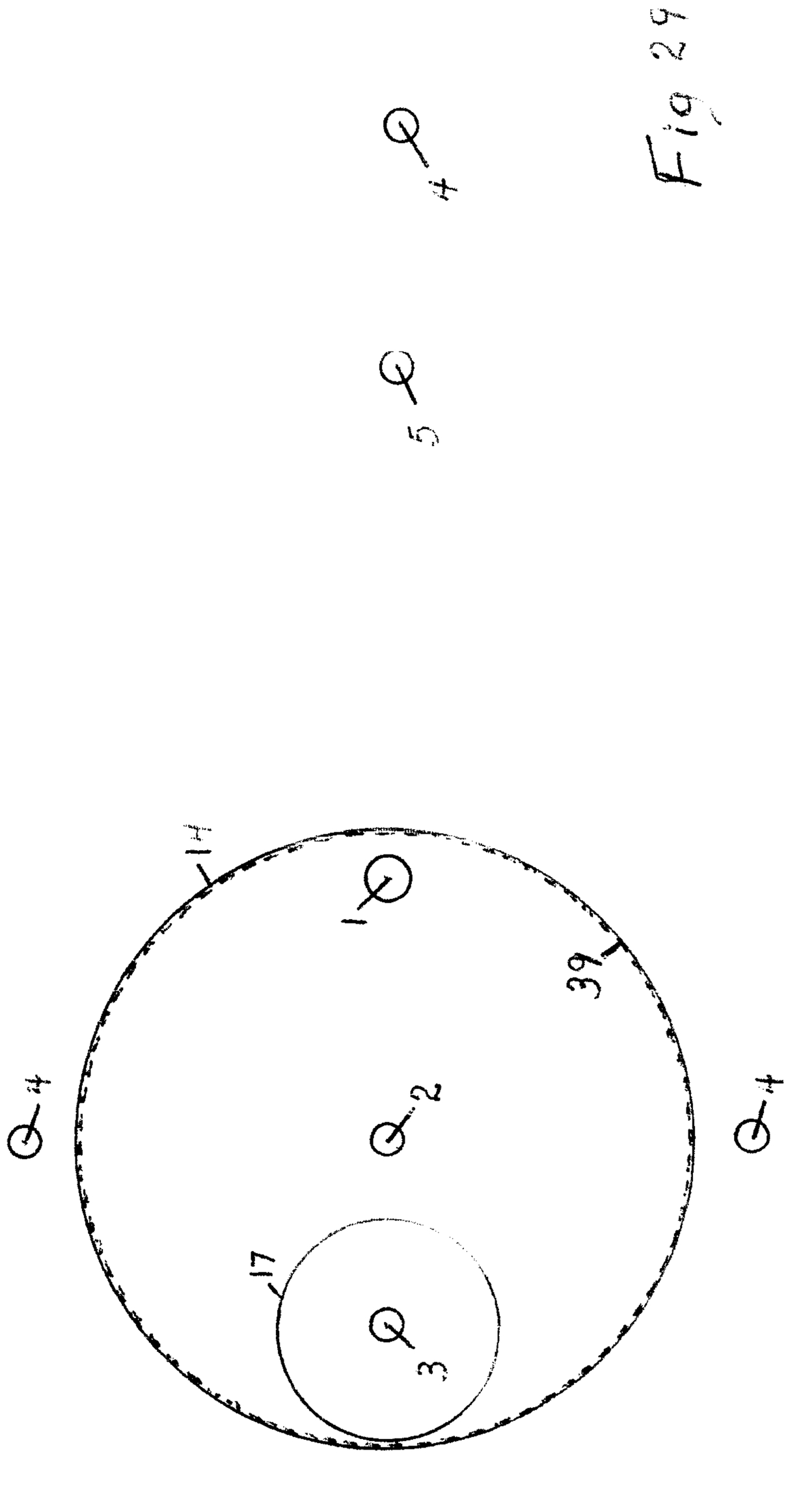


Fig. 28


Q4
Fig 2
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Q1
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Q4
Q2
Q4
17
Q3

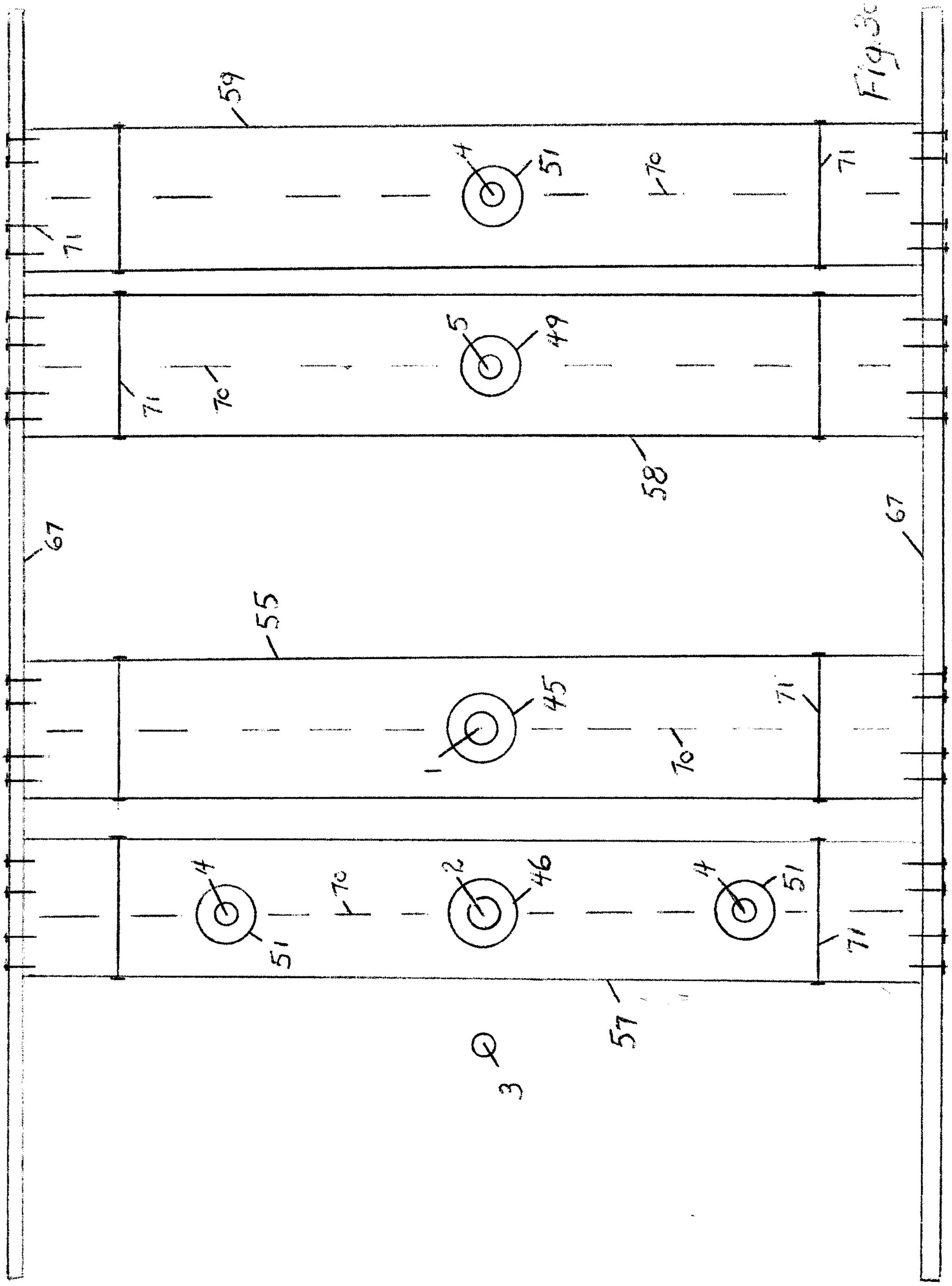
Fig. 3c
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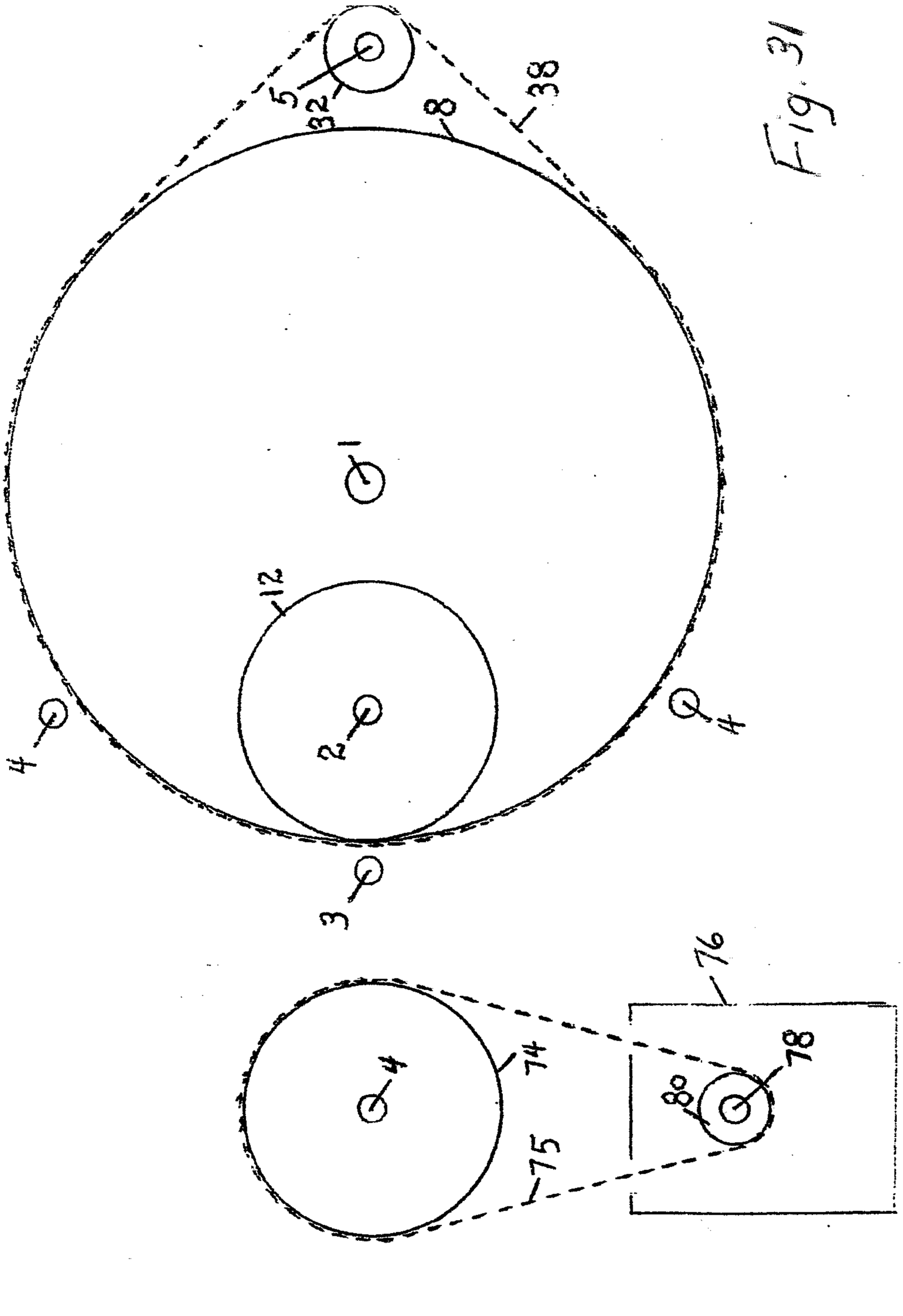
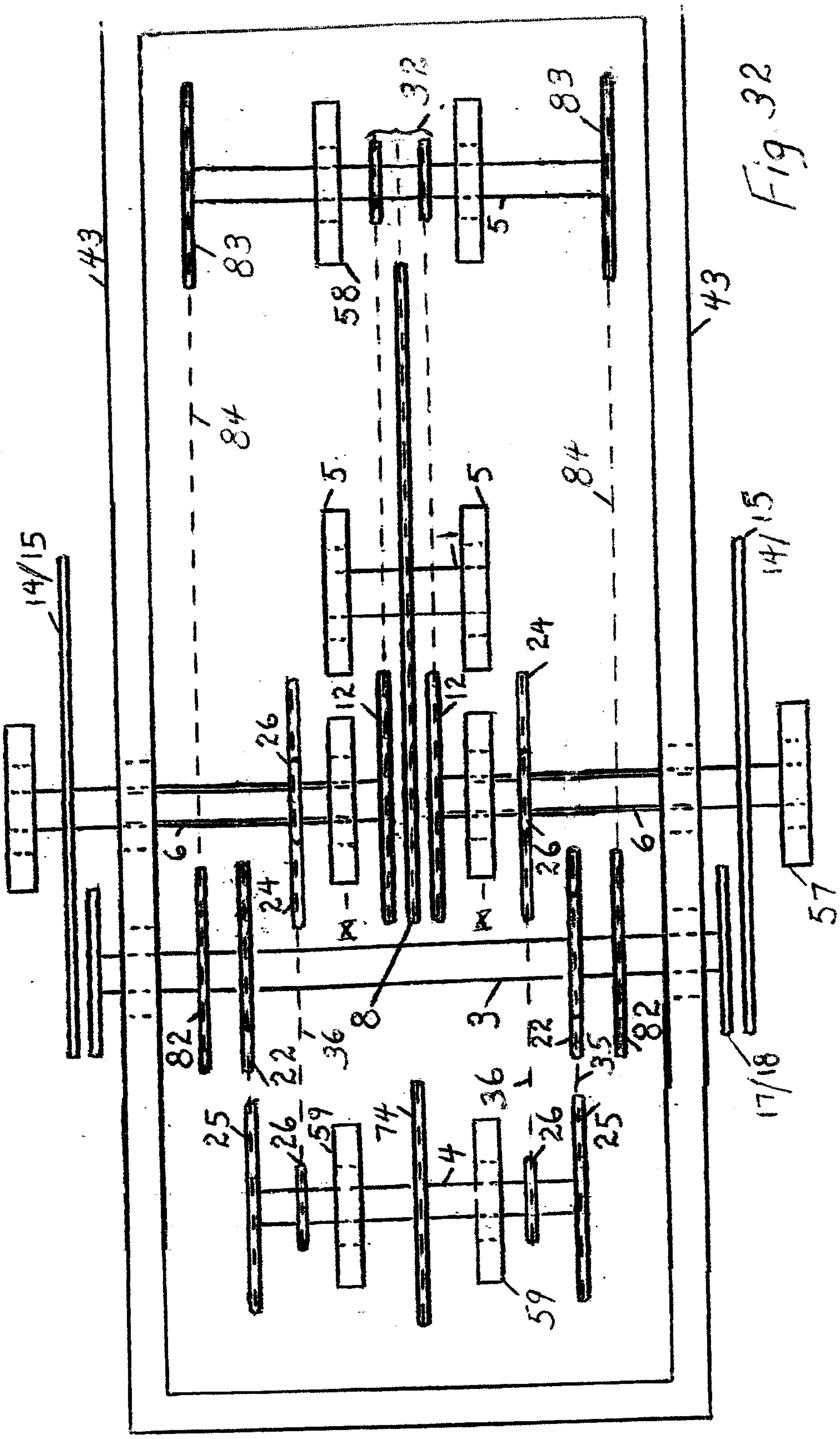


Fig. 31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59
59
74
4
17/18
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Fig 32

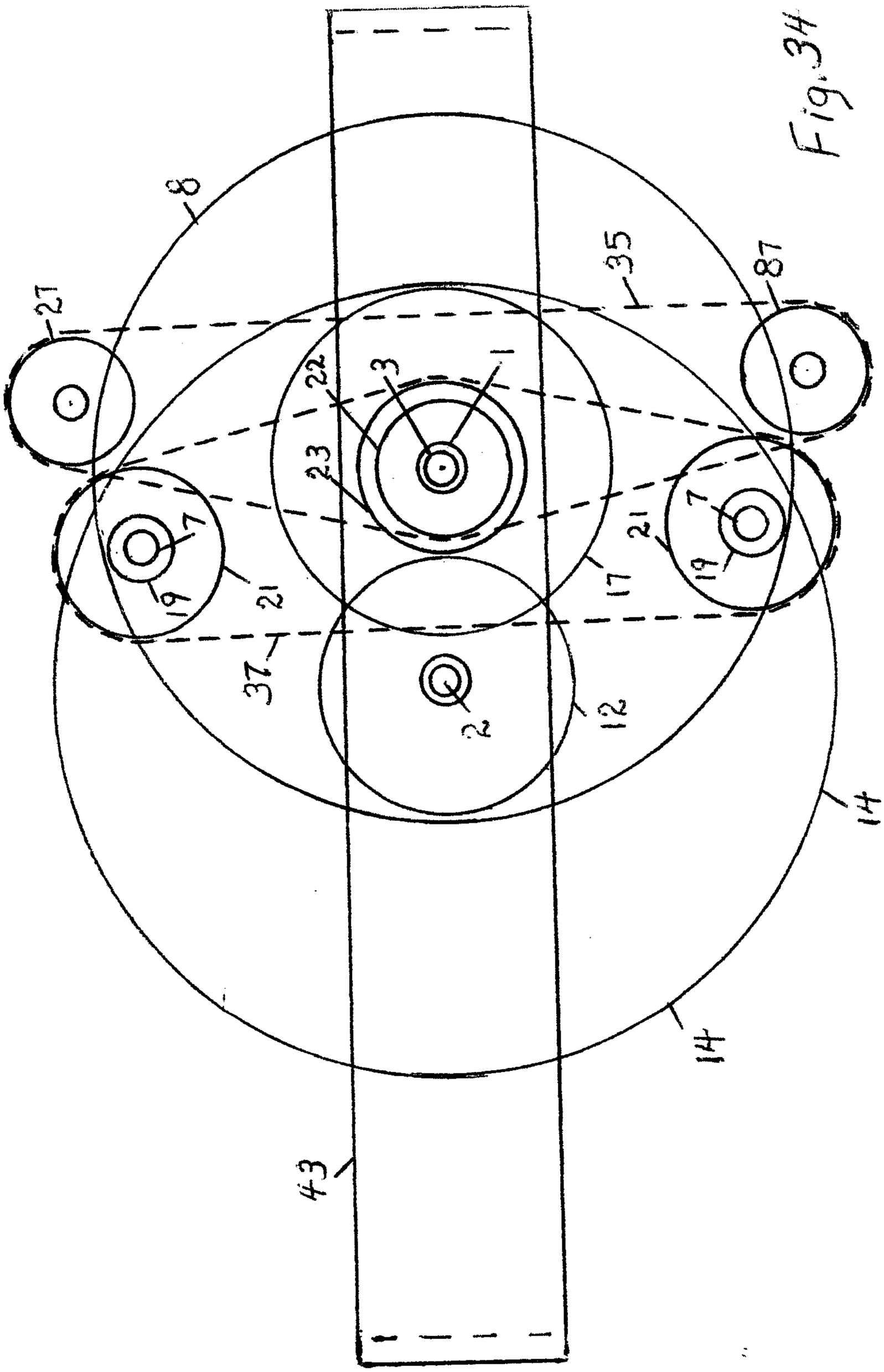

Fig. 34

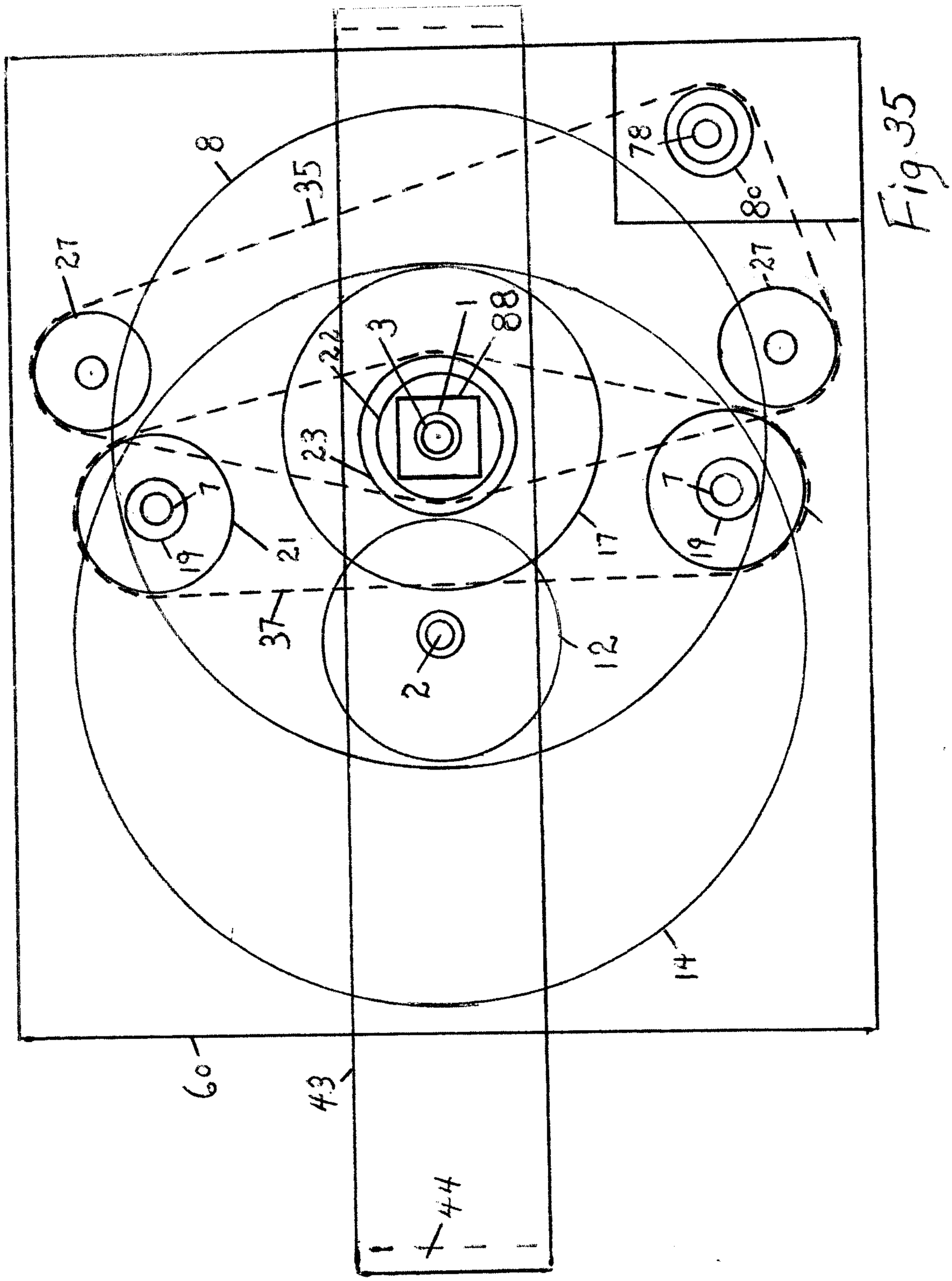

Fig 35

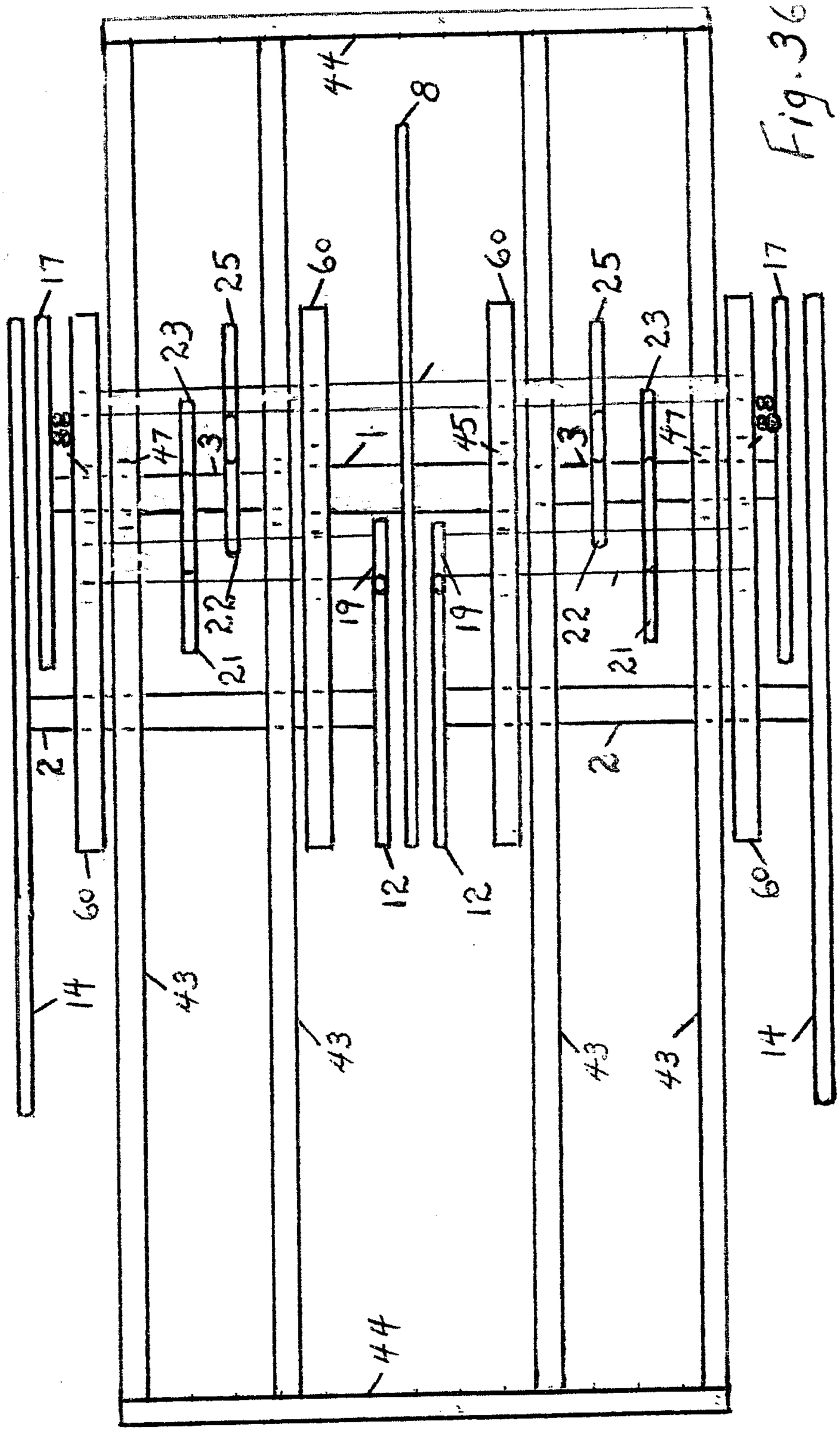

Fig. 36

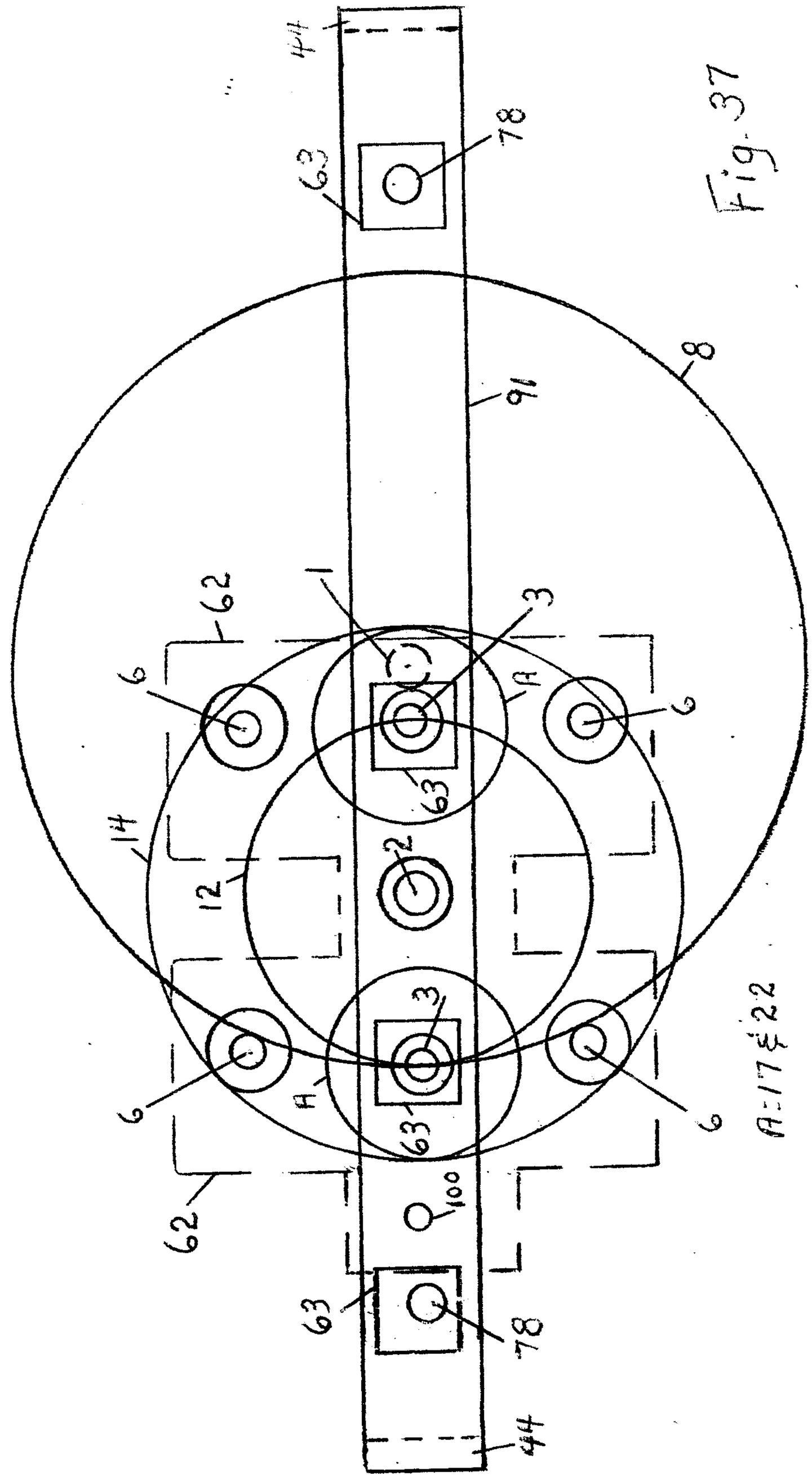

Fig. 37

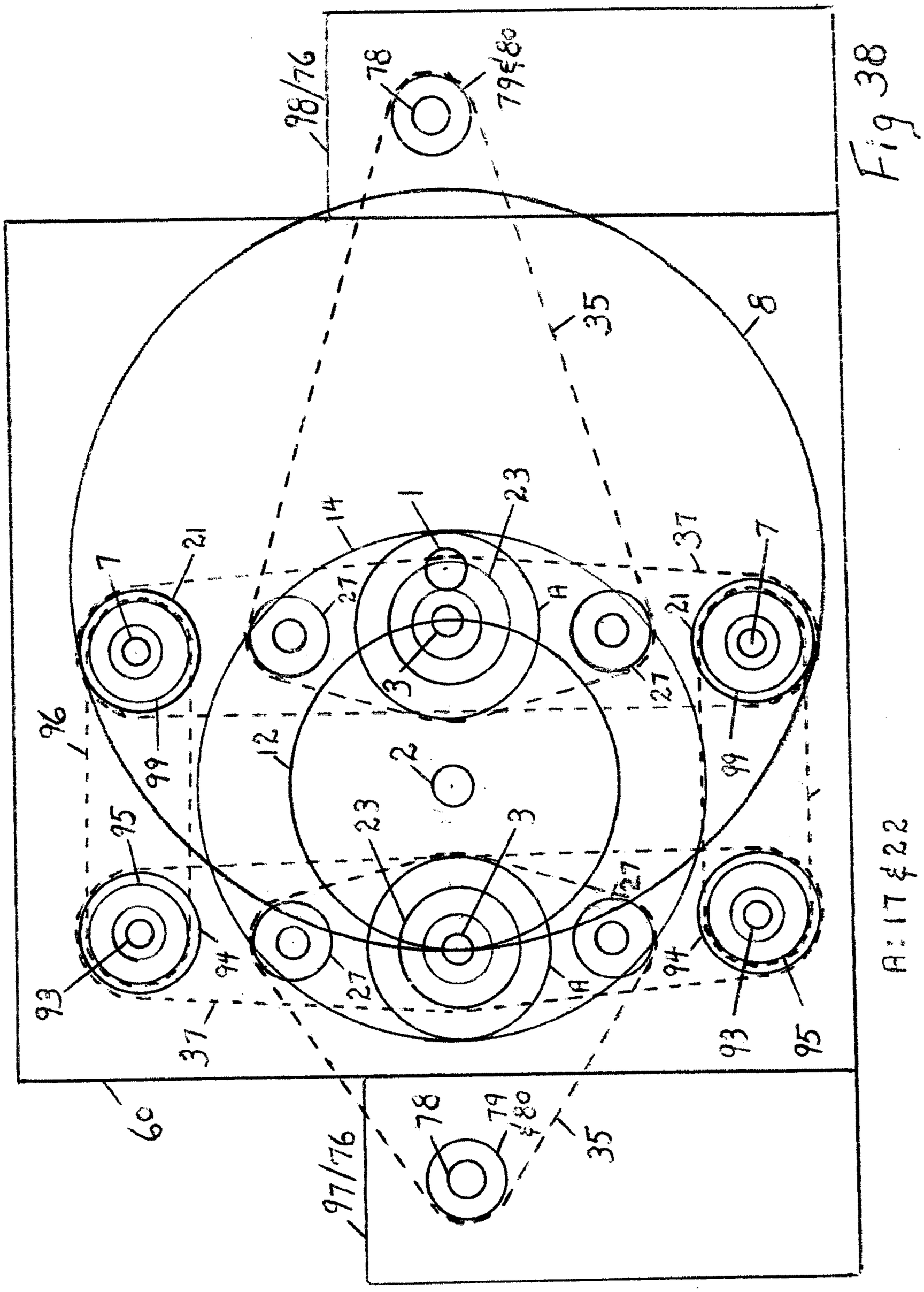
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Fig 38
A:17&22

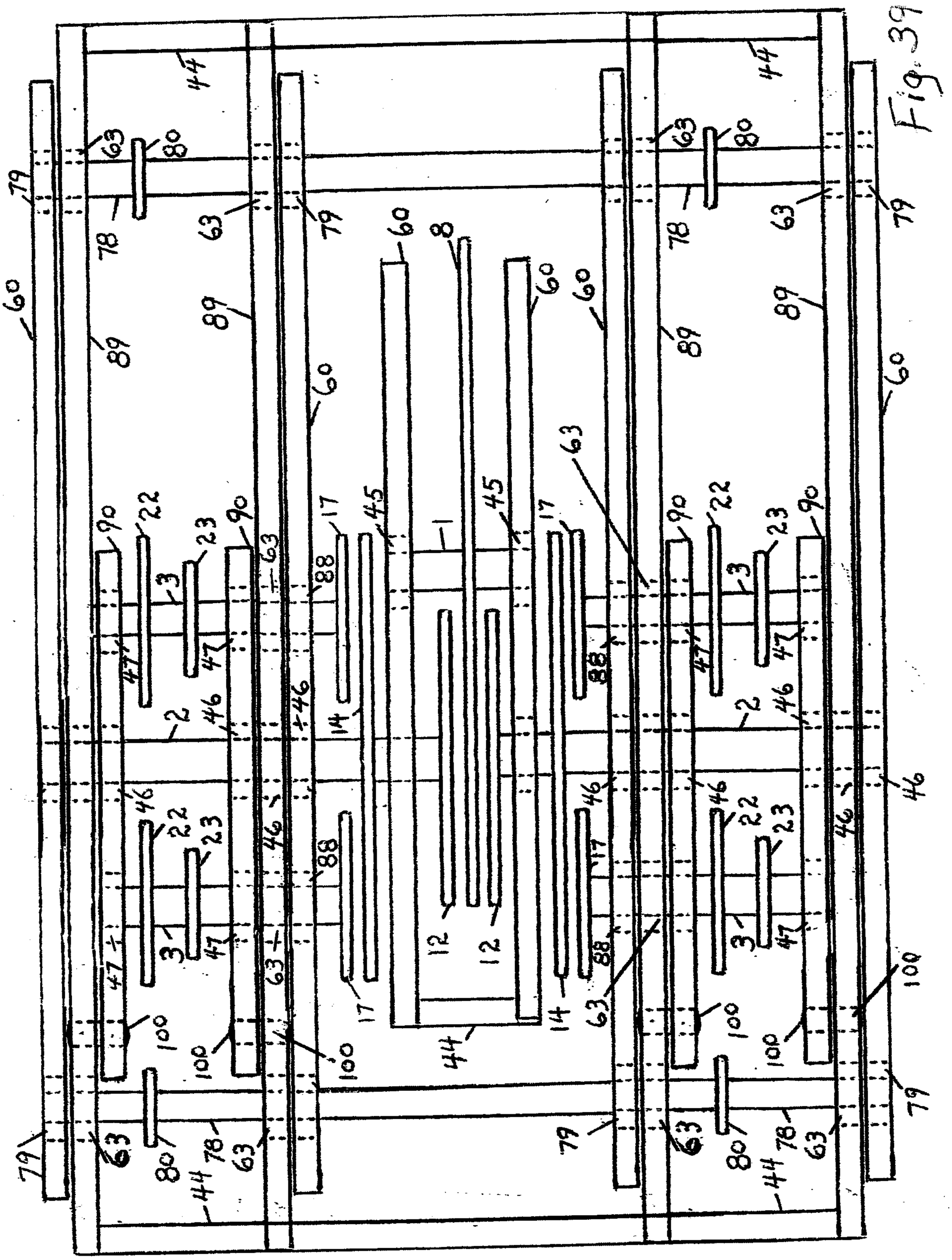
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Fig. 39

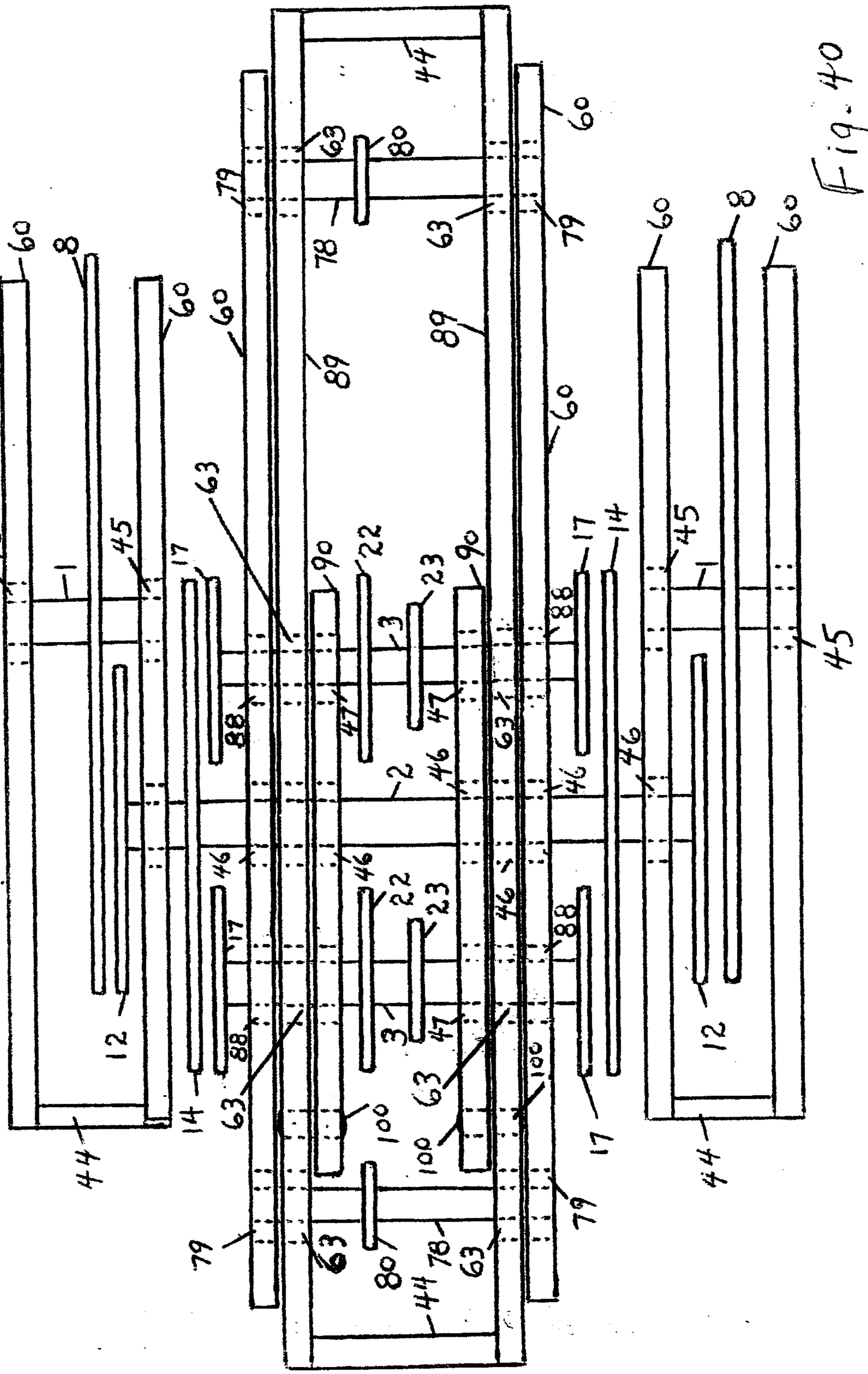

Fig. 40

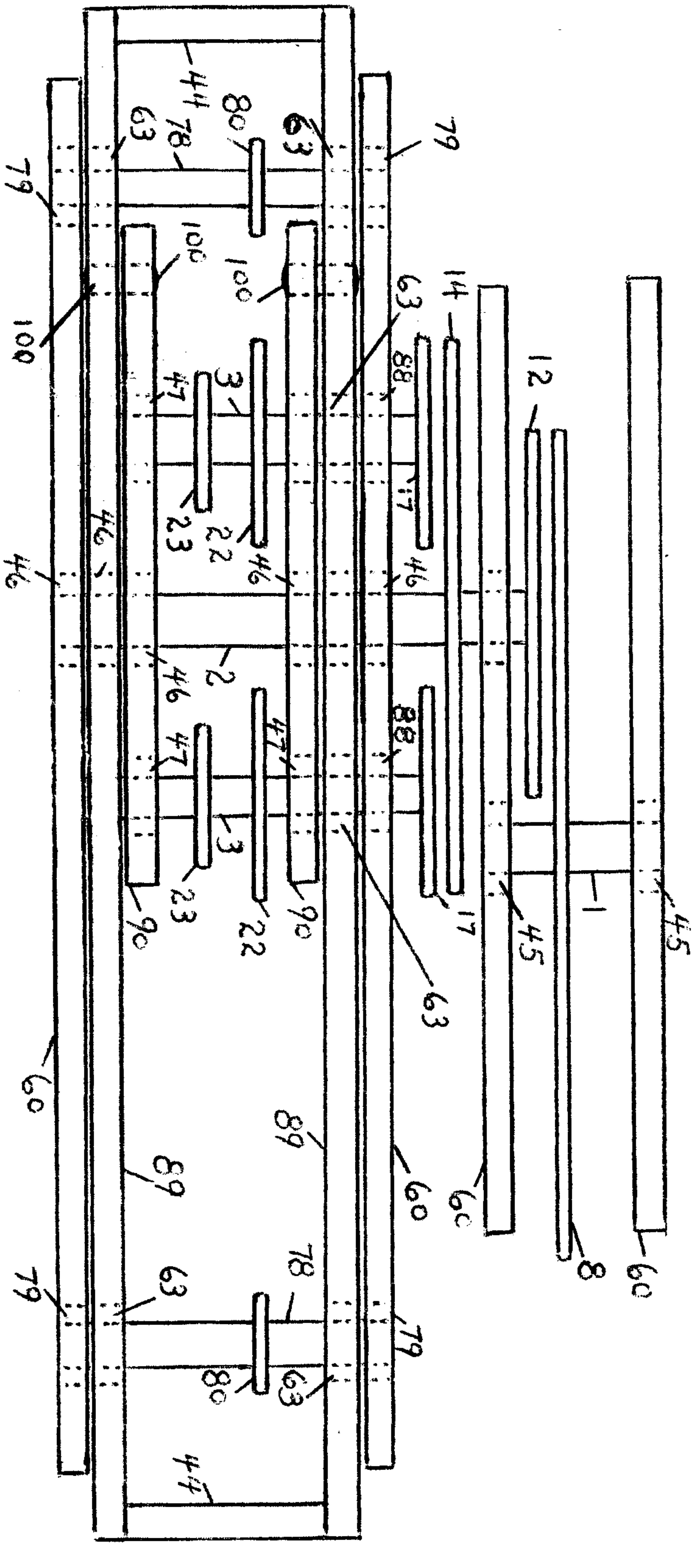

Fig. 41

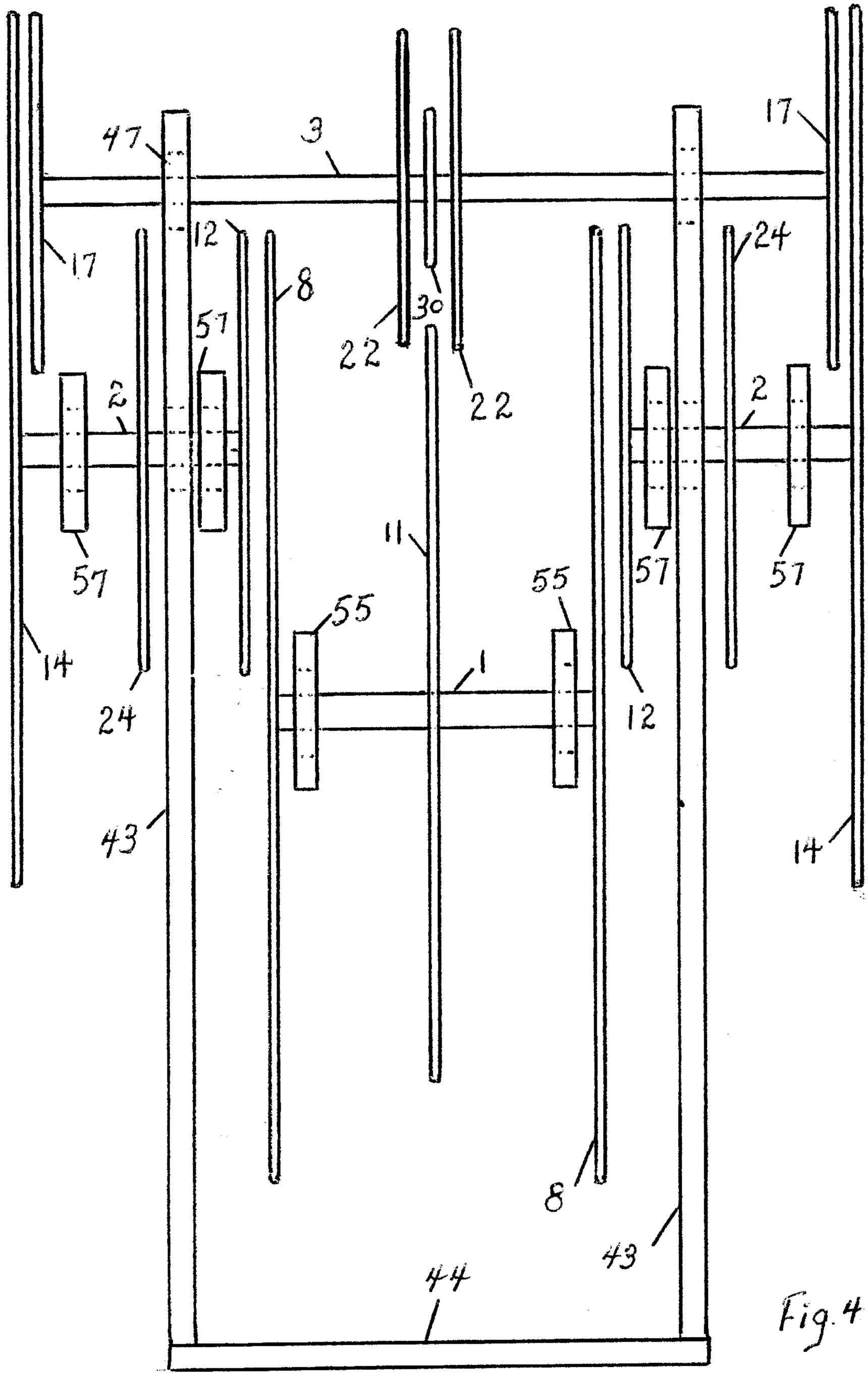
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Fig. 42

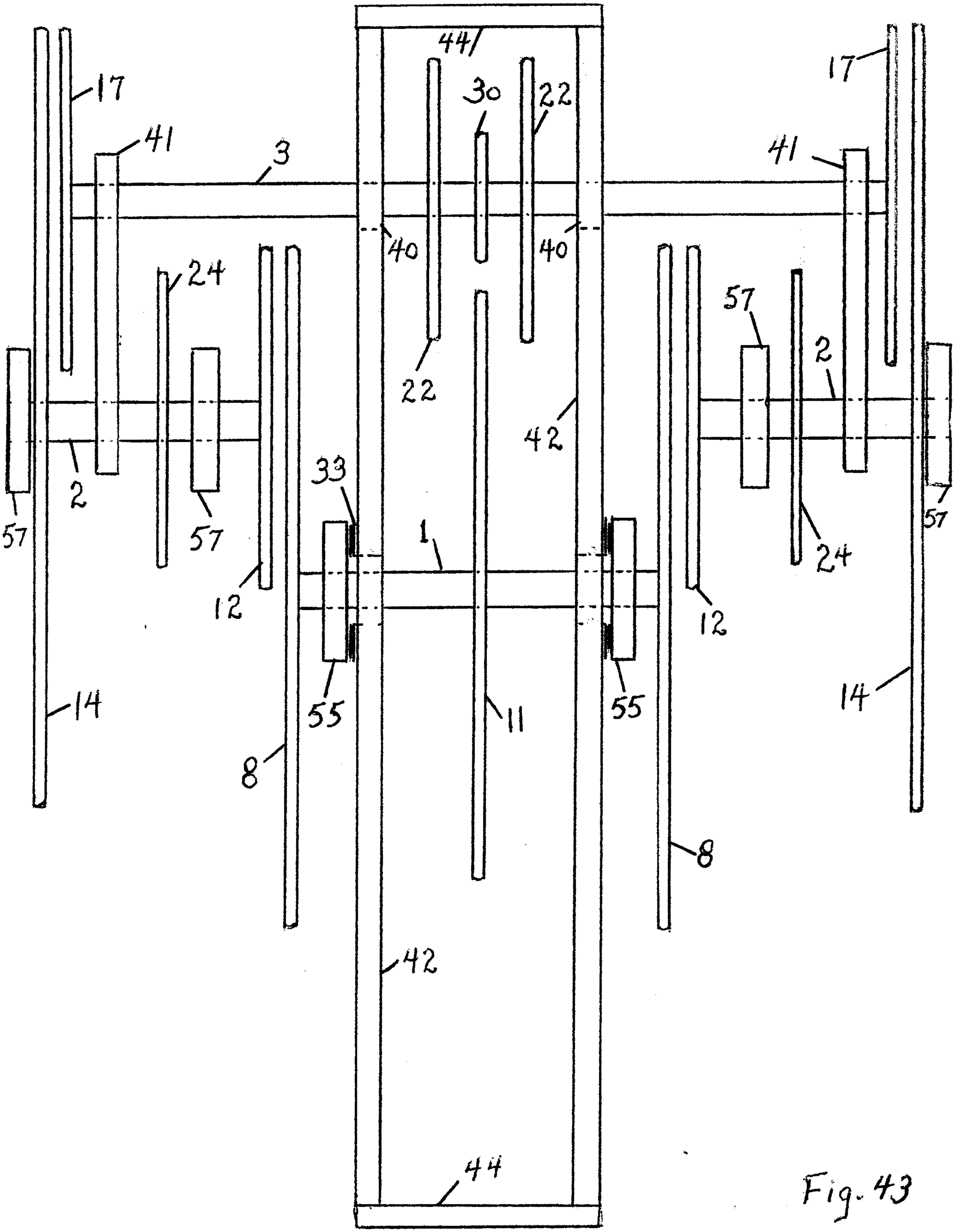
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Fig. 43

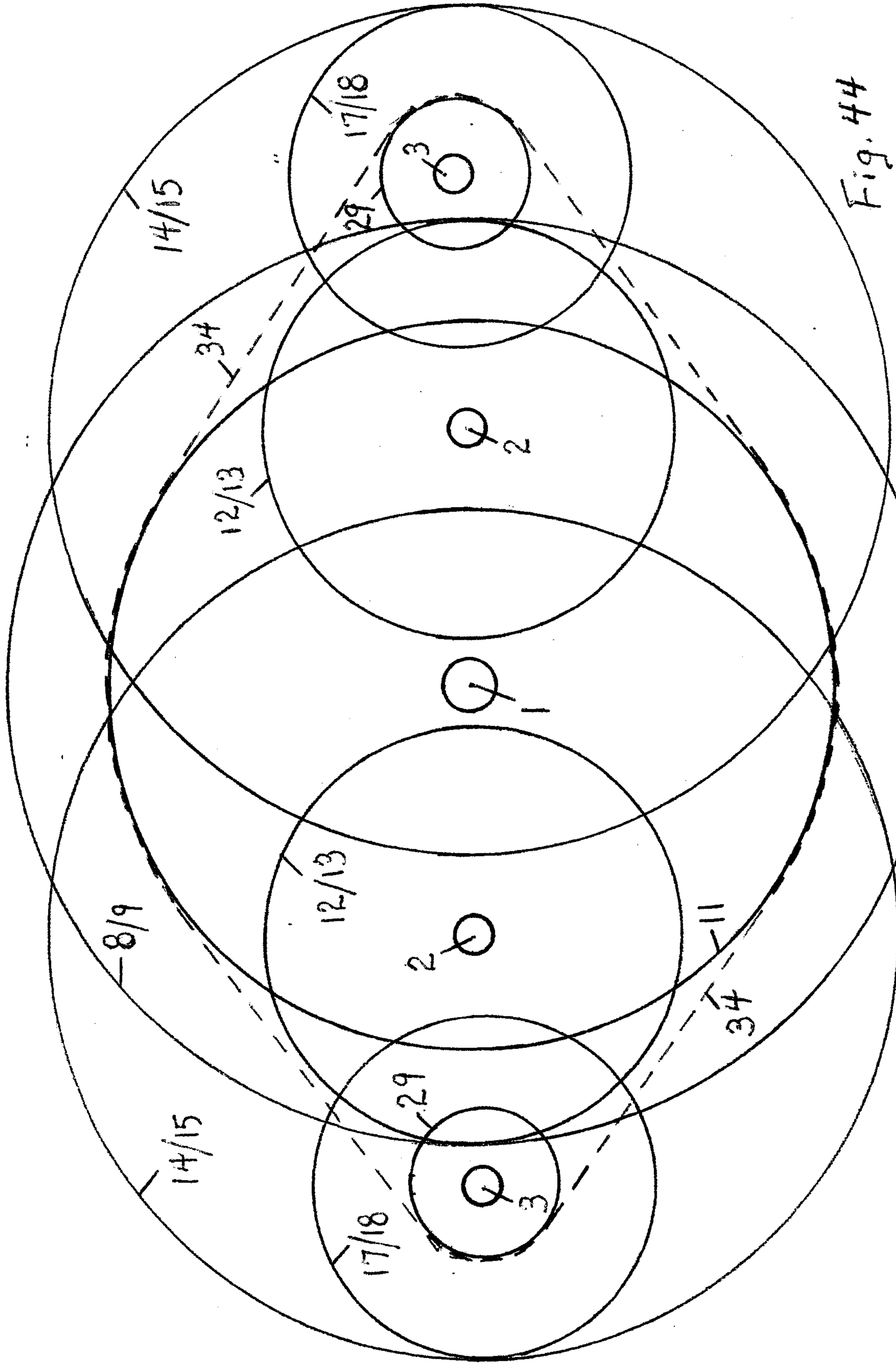

Fig. 44

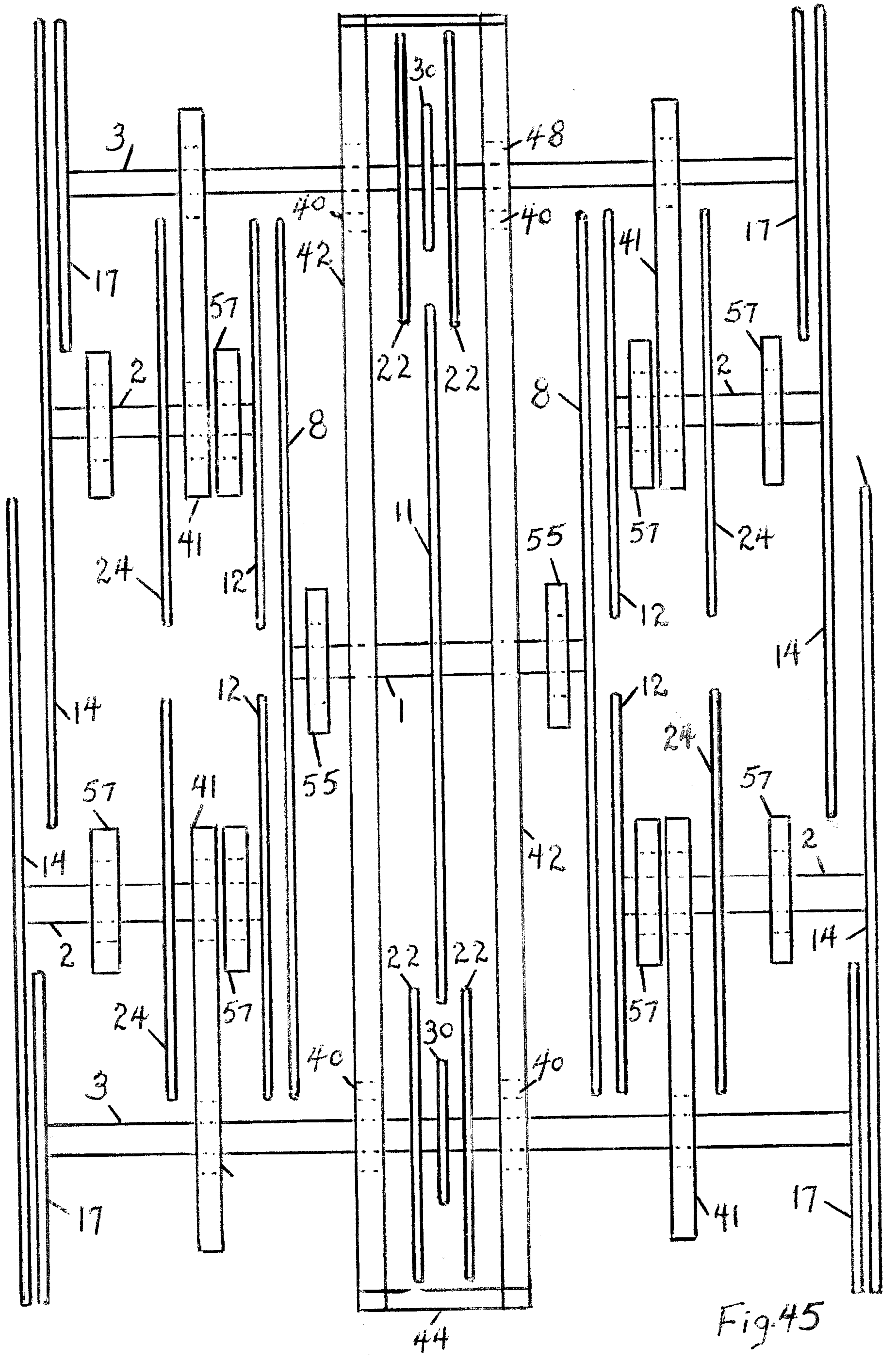
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Fig.45

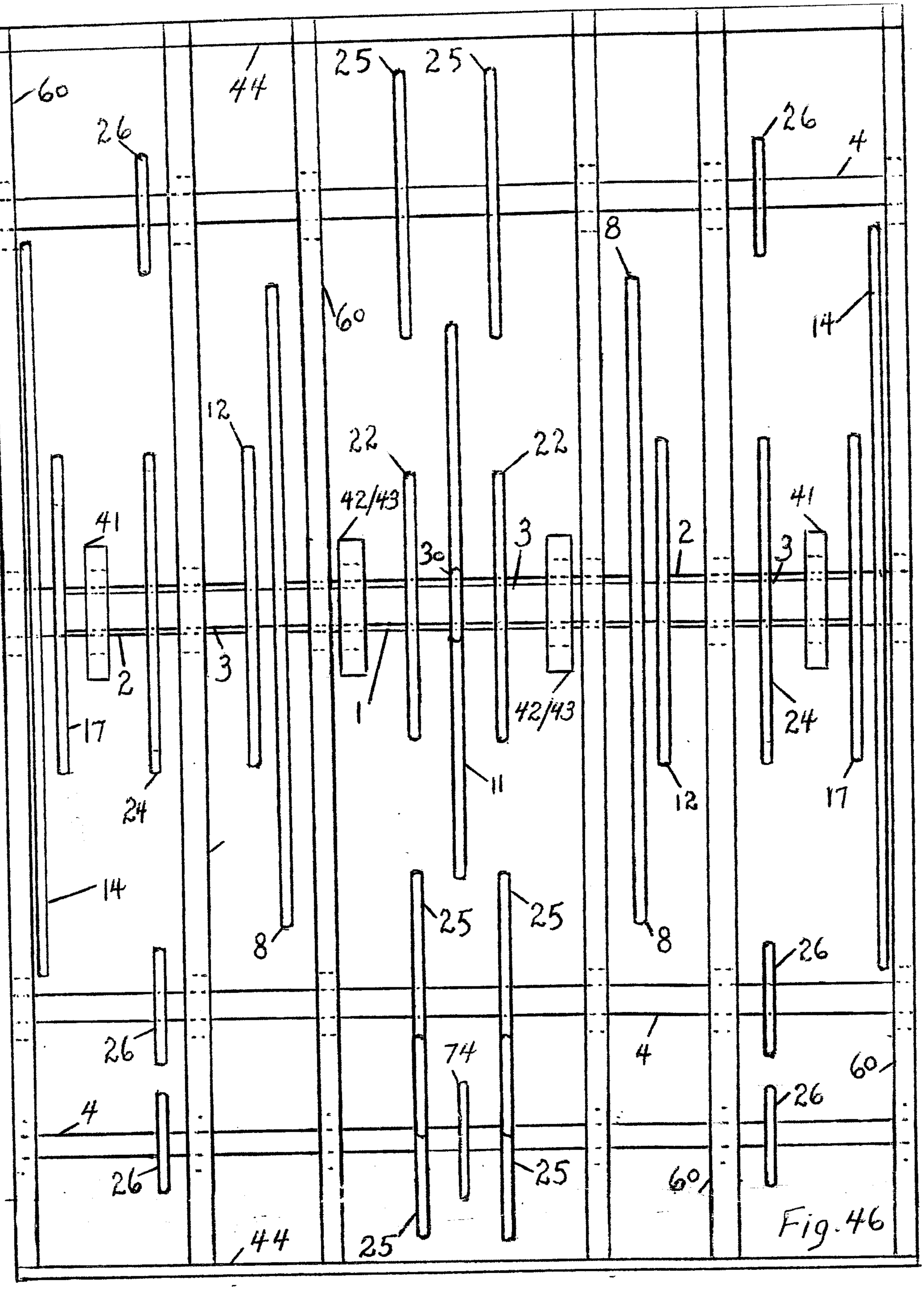
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Fig. 46

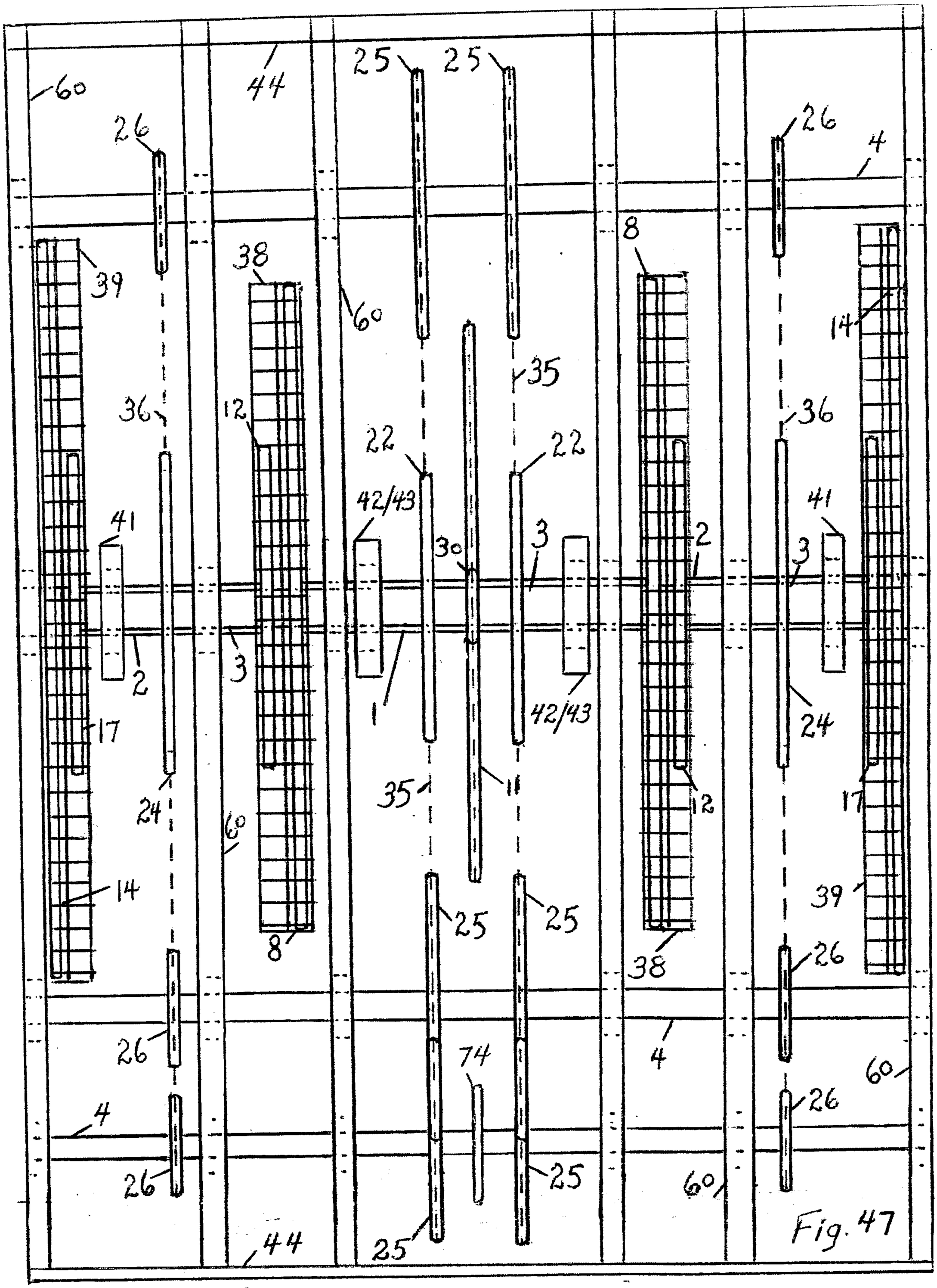
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Fig. 47

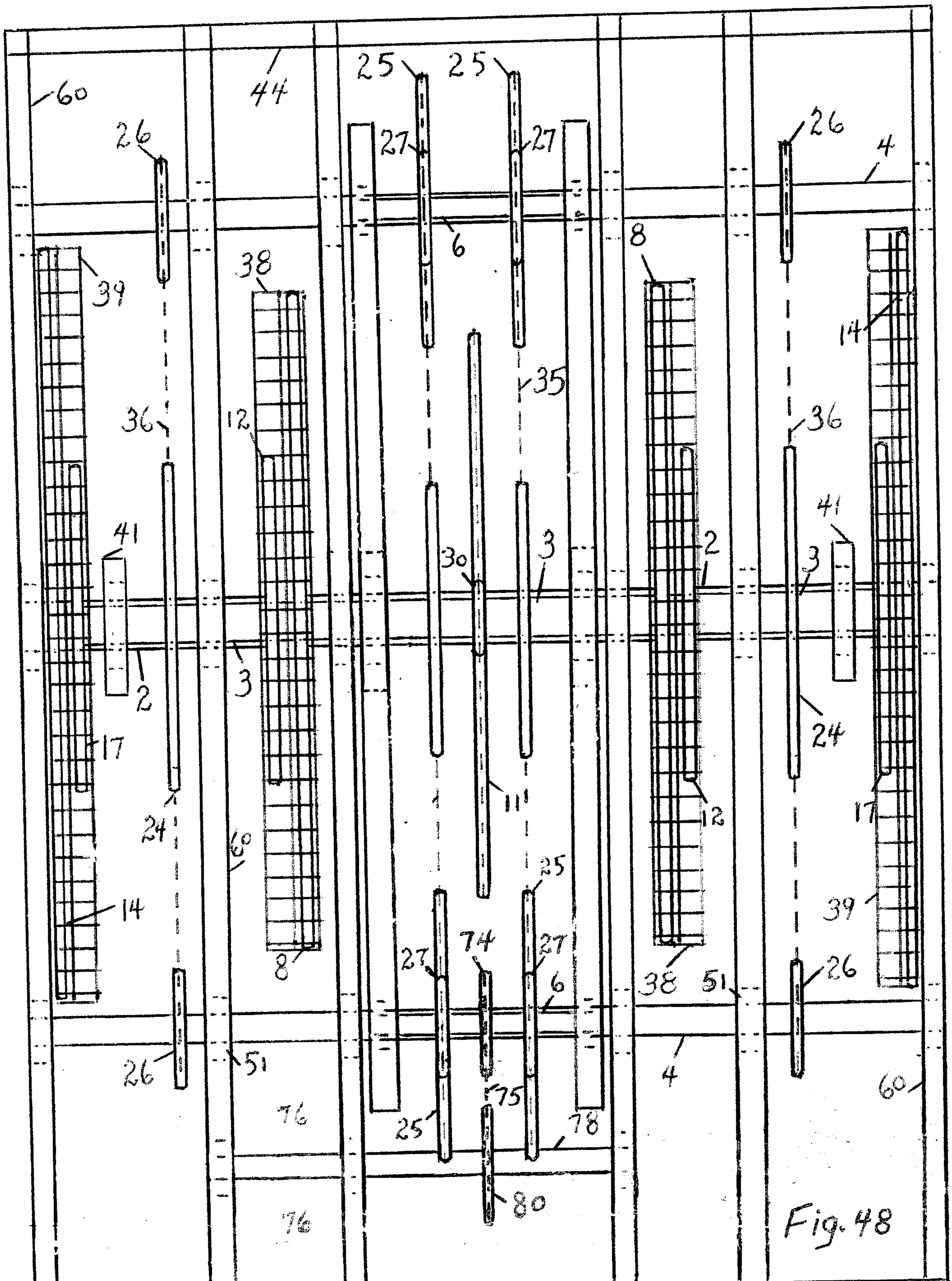
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Fig. 48

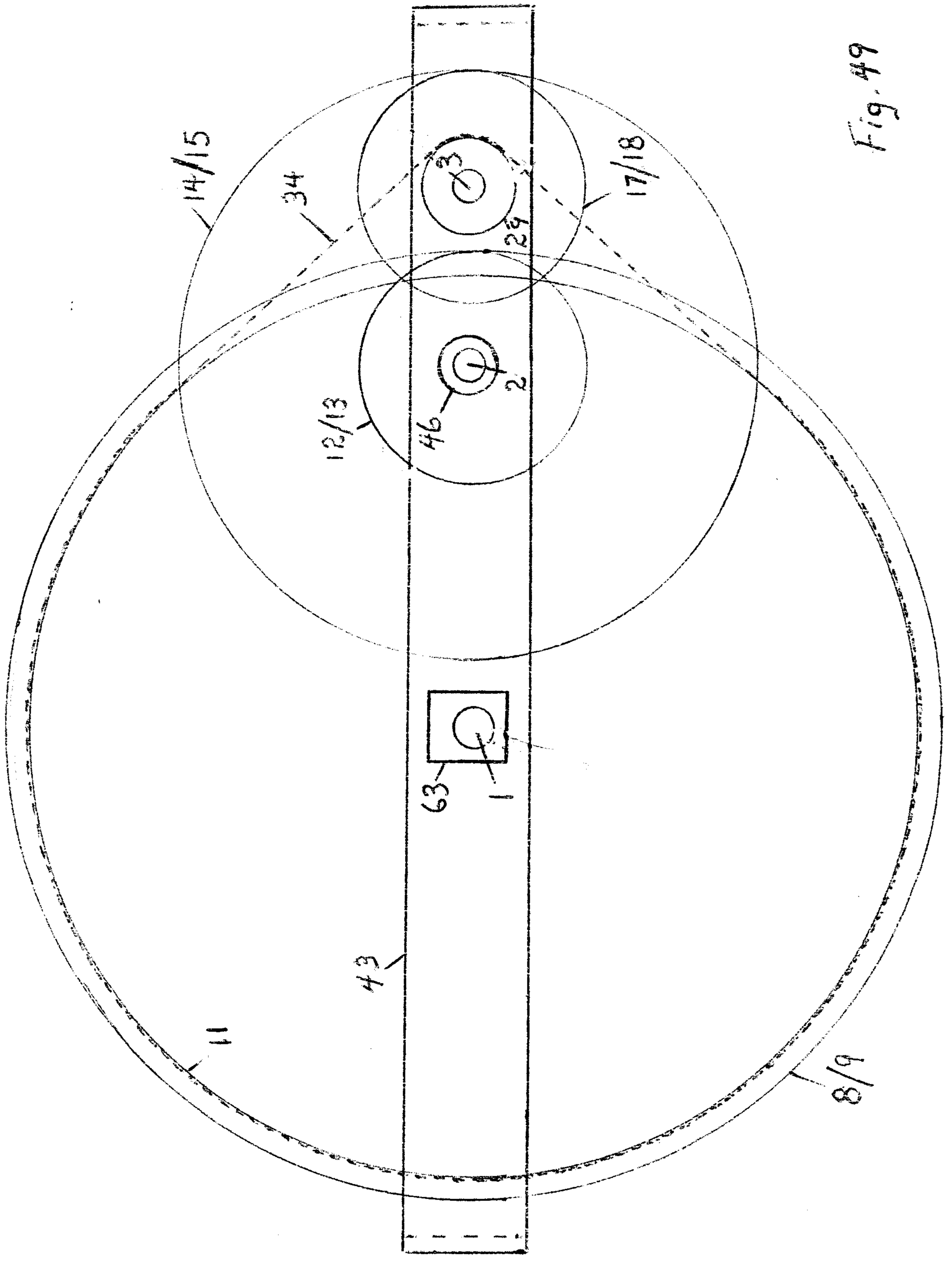
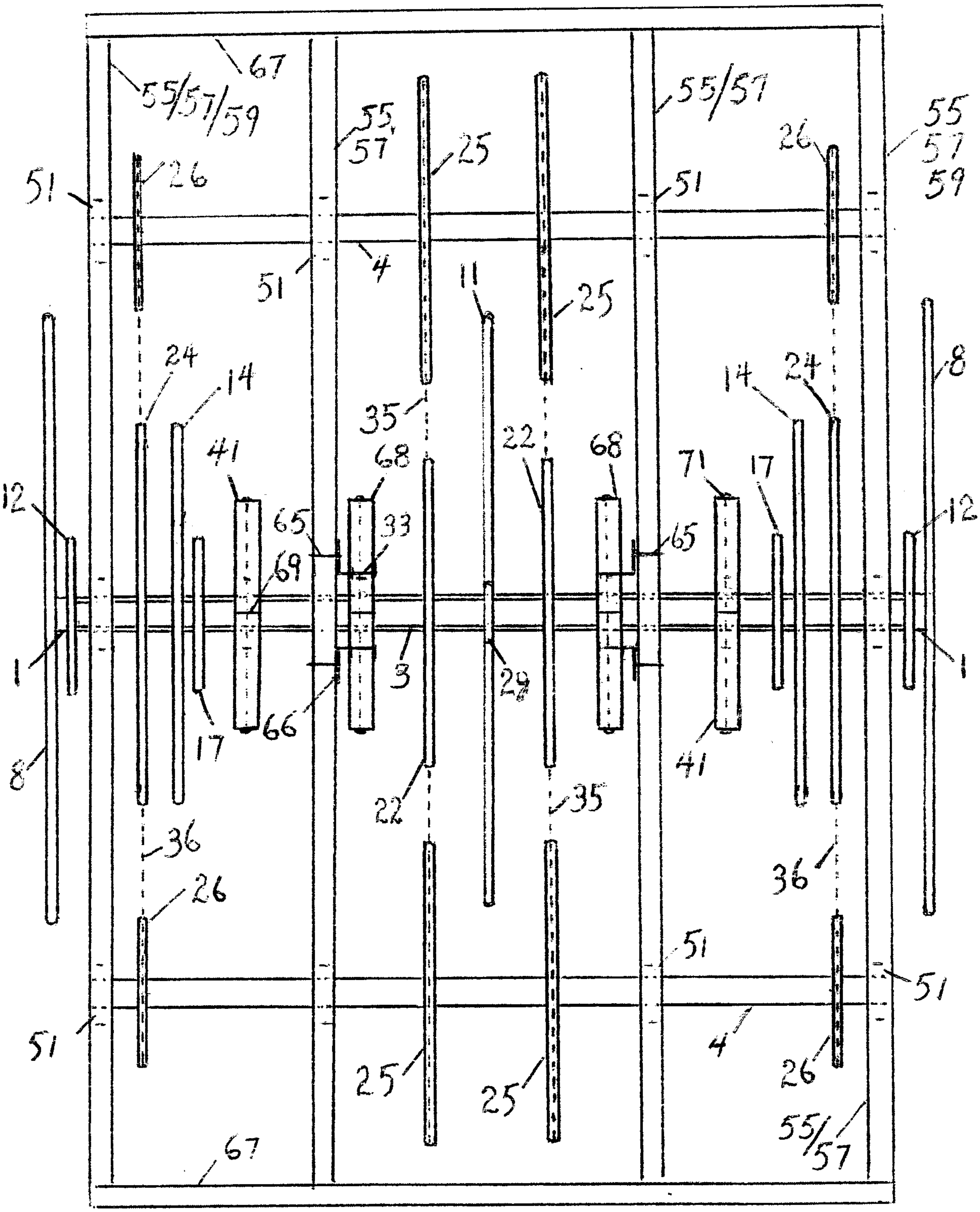


Fig. 4g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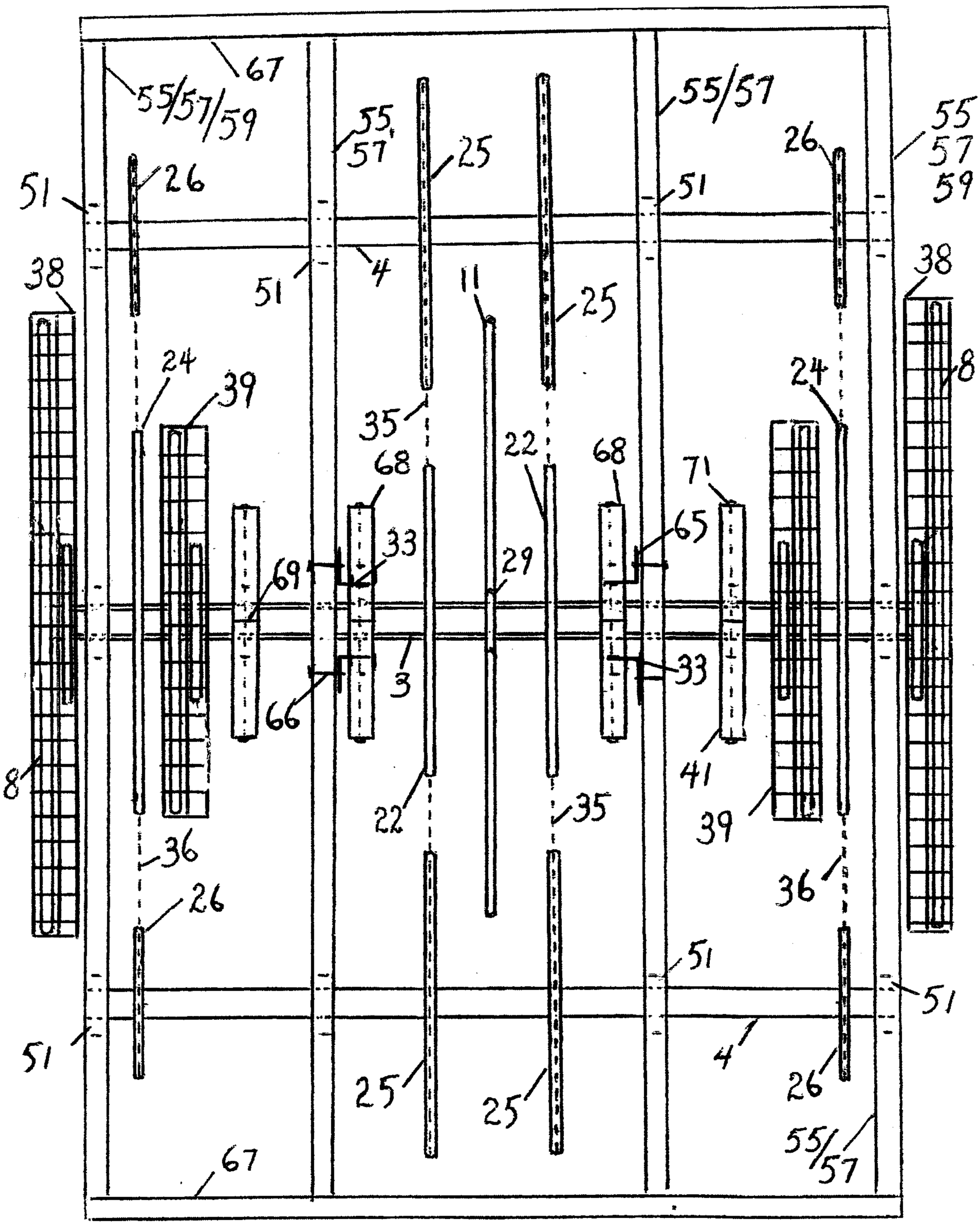
67
55/57

Fig. 50


67
55/57/59
55
57
25
55/57
26
55
57
59
51
26
51
51
4
11
25
38
38
24
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24
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68
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33
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33
3
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41
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36
36
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26
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51
51
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25
25
26
55/57
67

Fig. 51

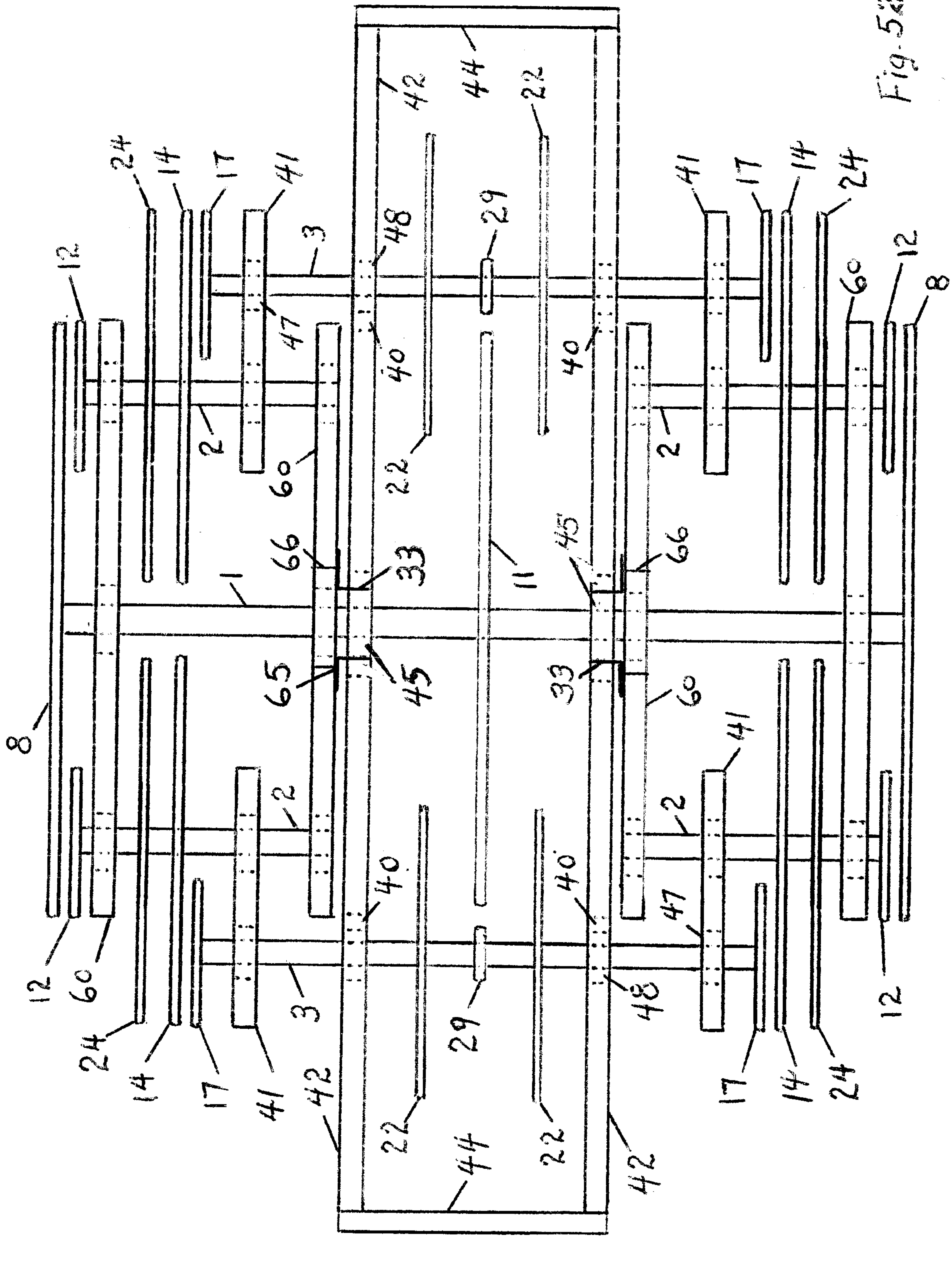


Fig. 52

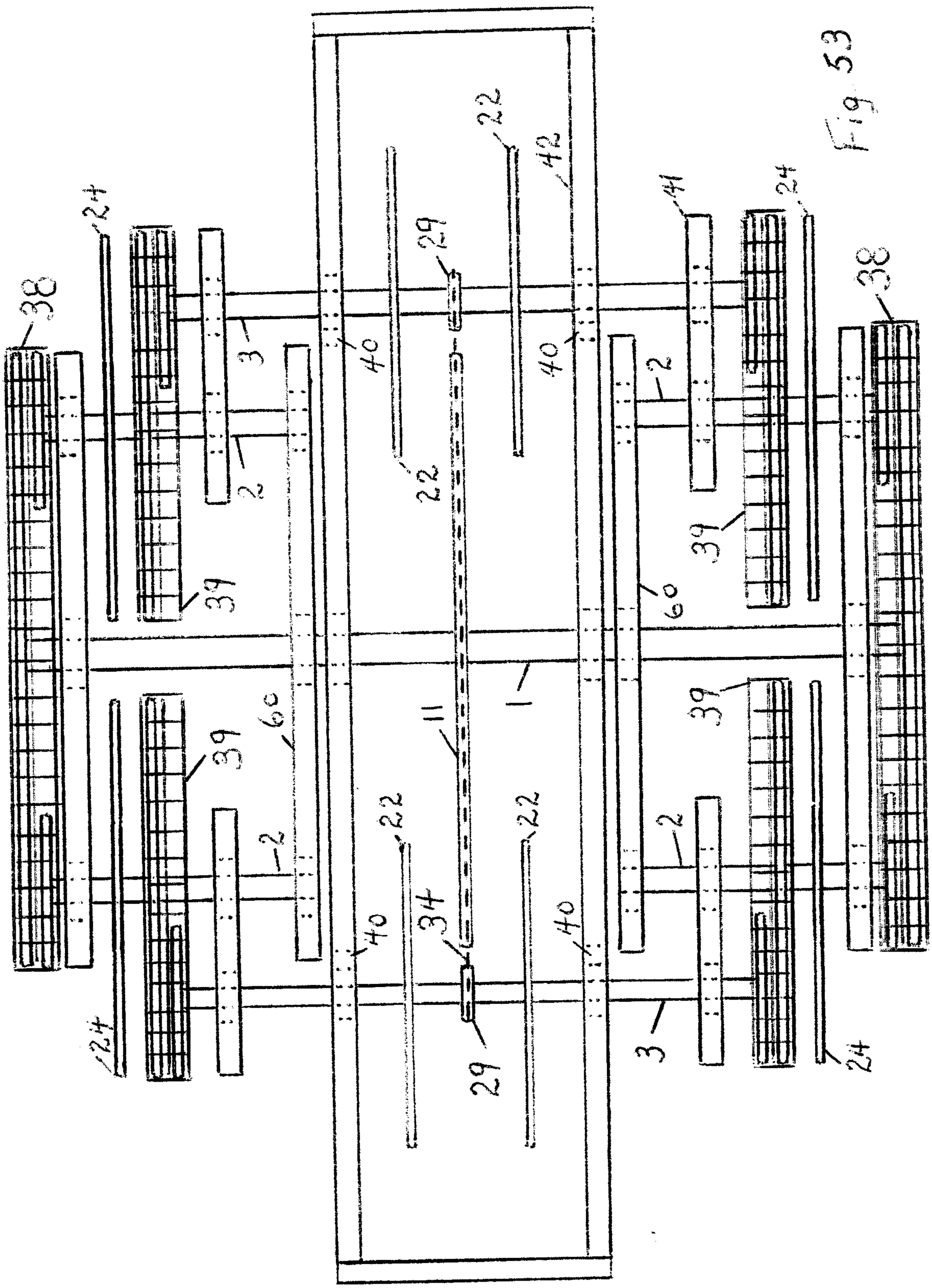


Fig 53

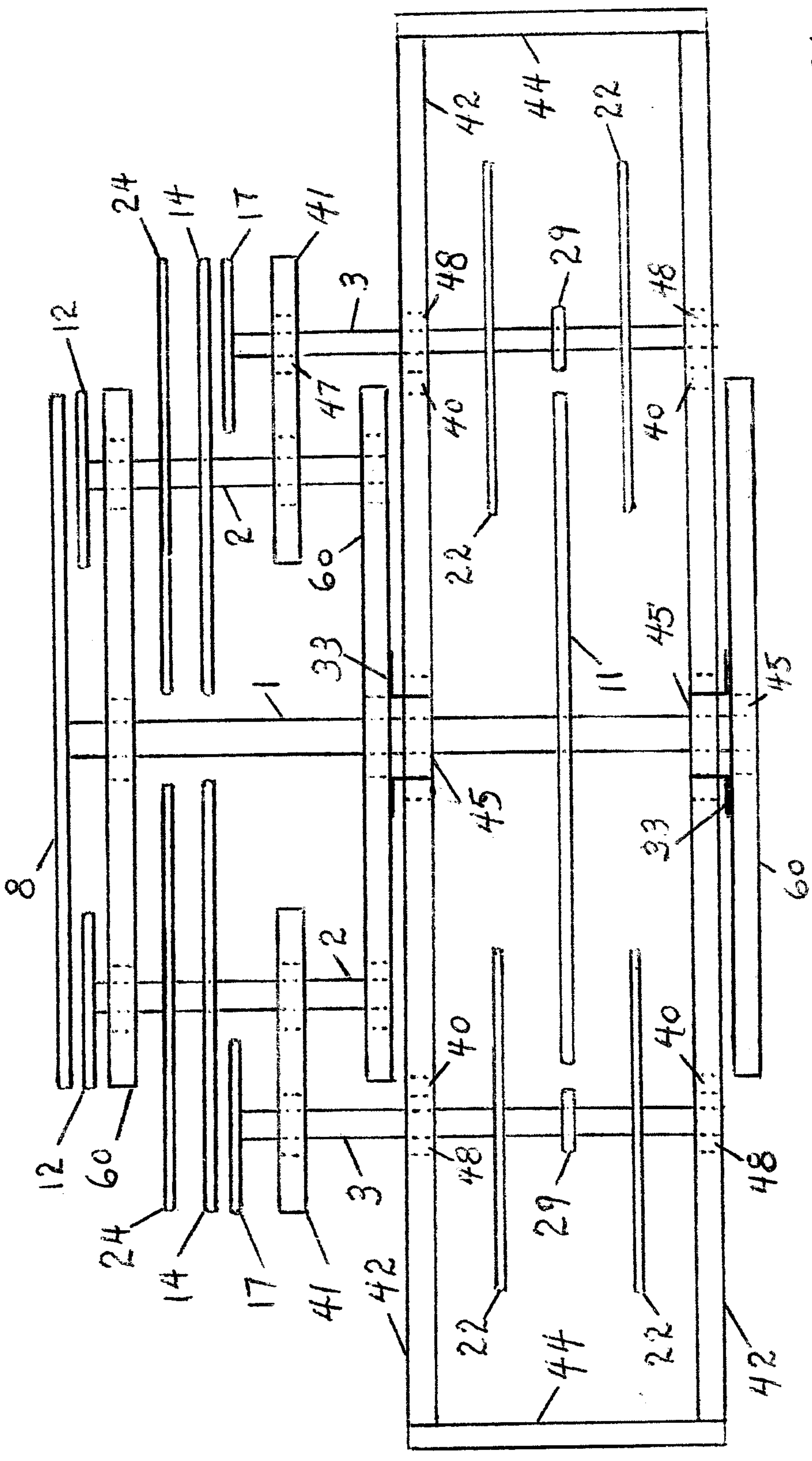


Fig. 54

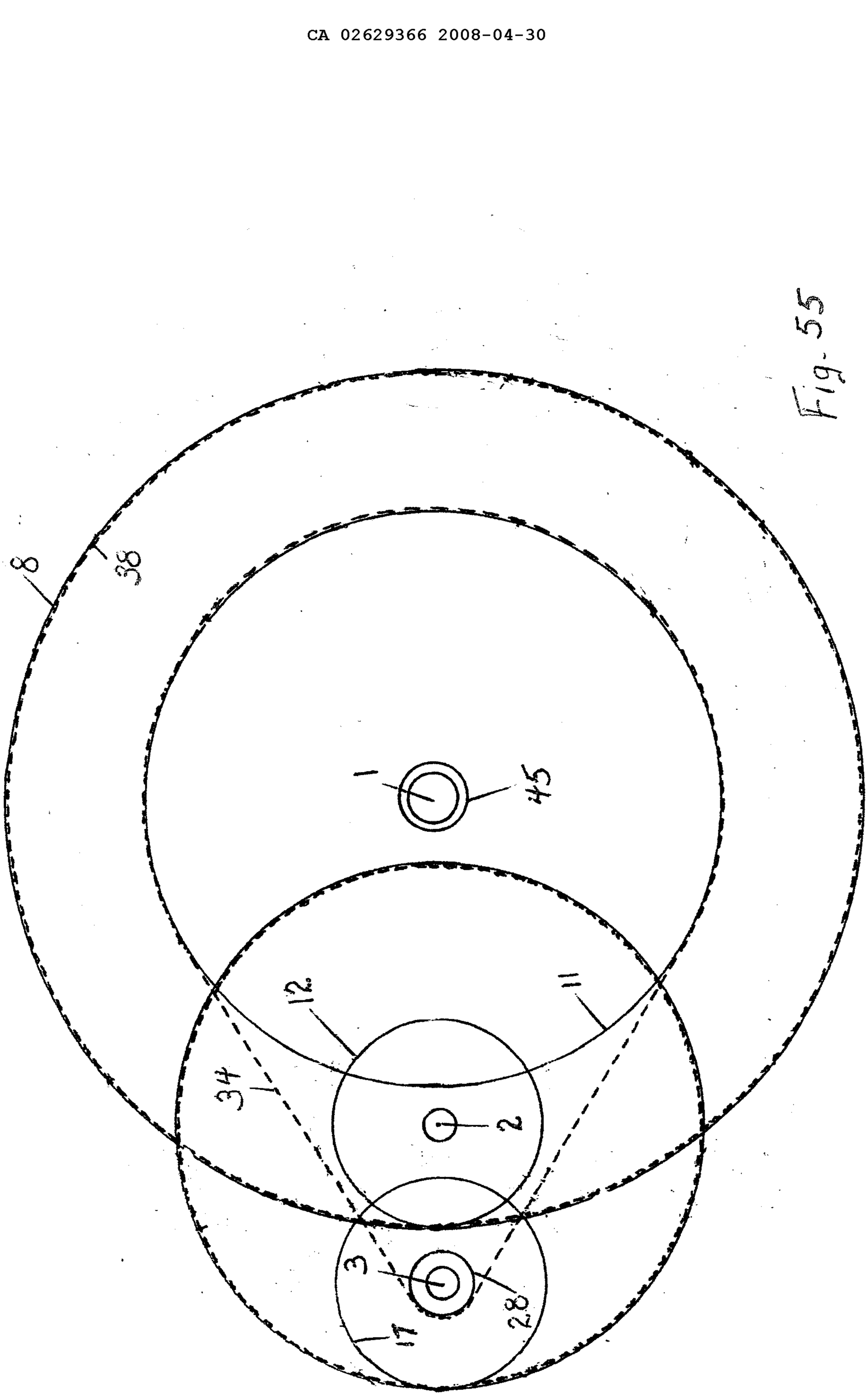
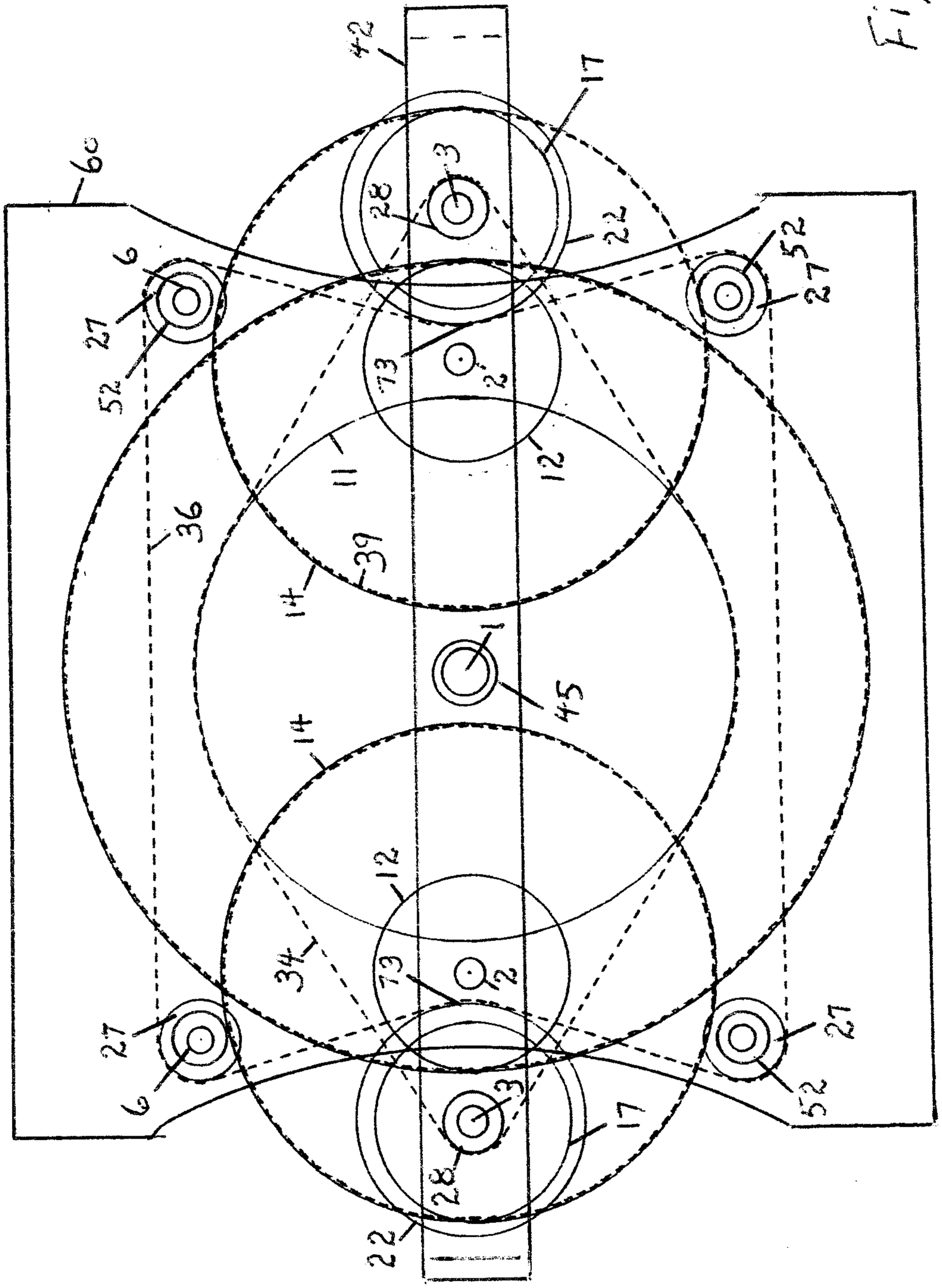


Fig 5

Fig. 5b


42
17
3
28
22
6c
6
27
52
27
52
73
2
11
12
36
39
14
1
45
14
12
34
73
2
27
6
3
17
52
27
28
22

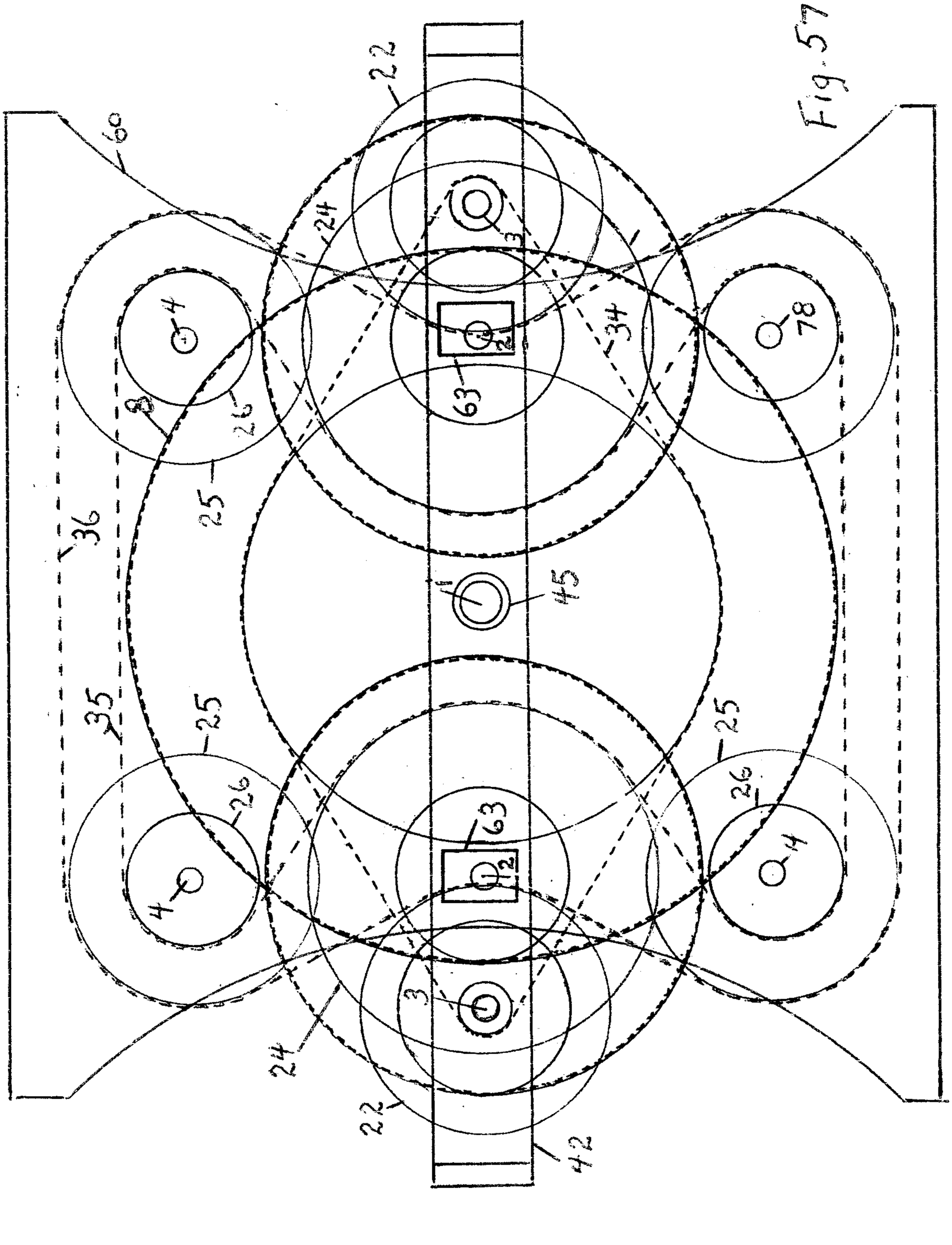
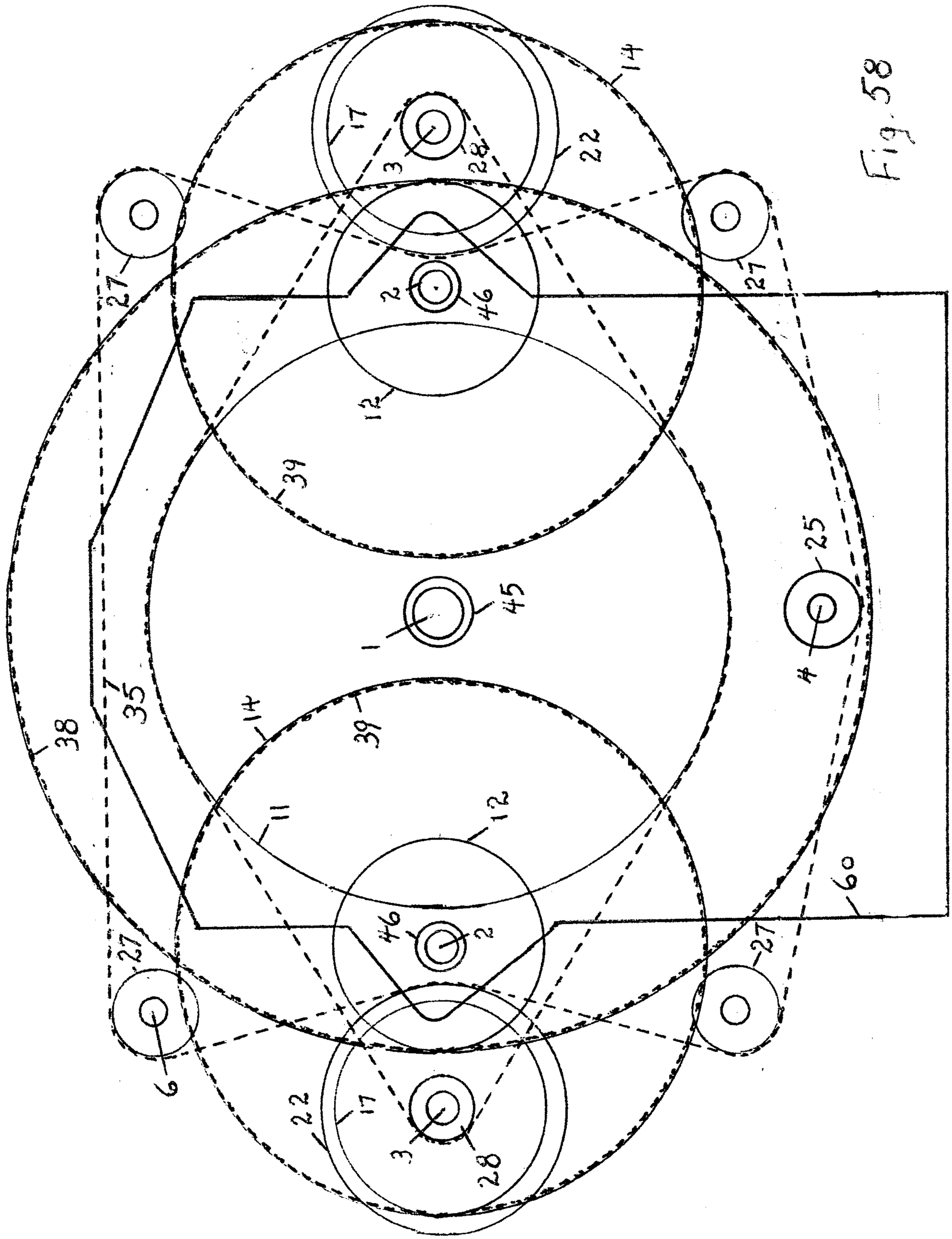


Fig. 57


14
17
3
28
22
27
2
46
12
39
45
1
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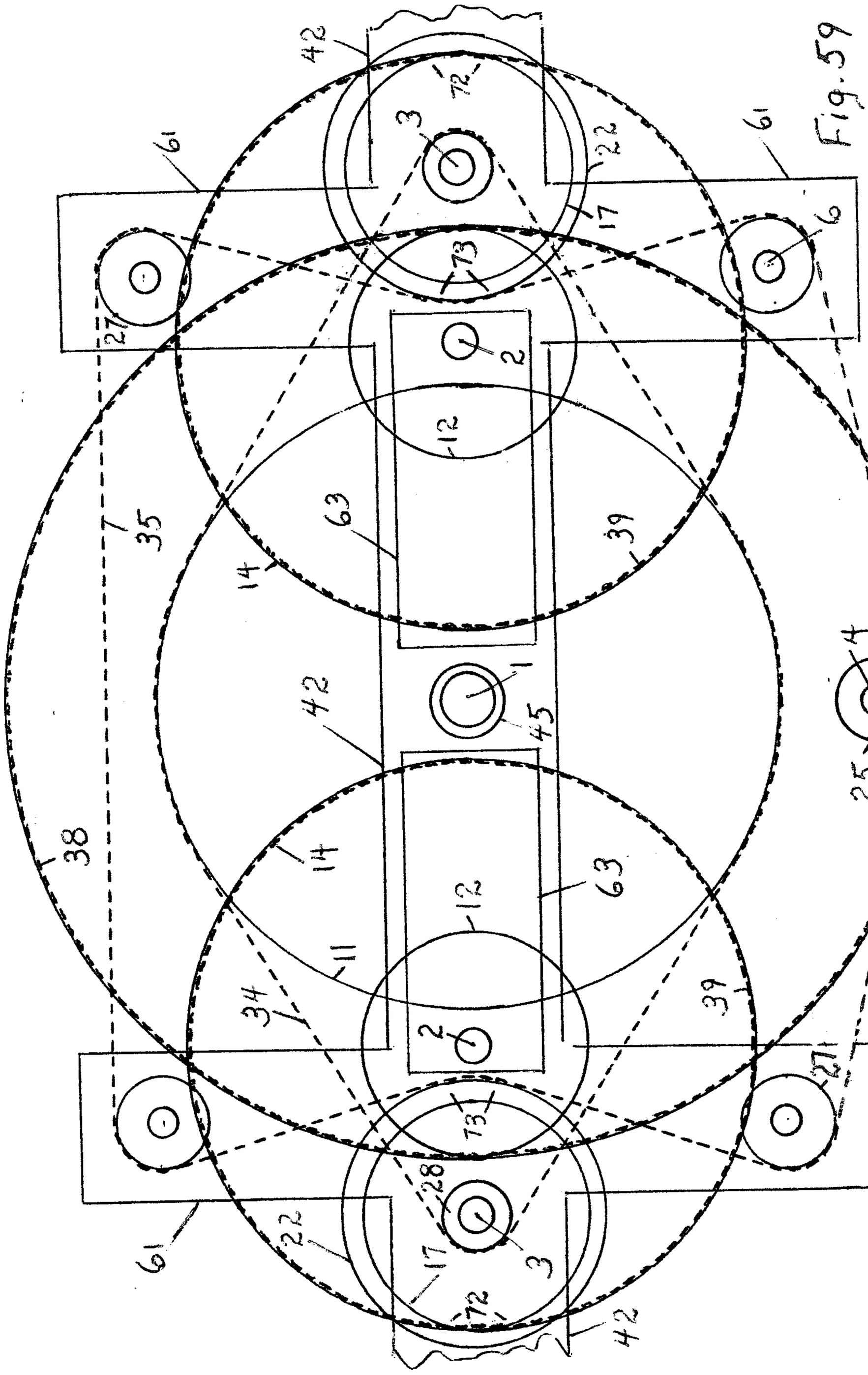
38
35
14
39
11
12
46
2
27
27
60
6
22
17
3
28

Fig. 58


42
72
3
61
22
61
17
6
73
27
2
12
63
35
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14
42
1
45
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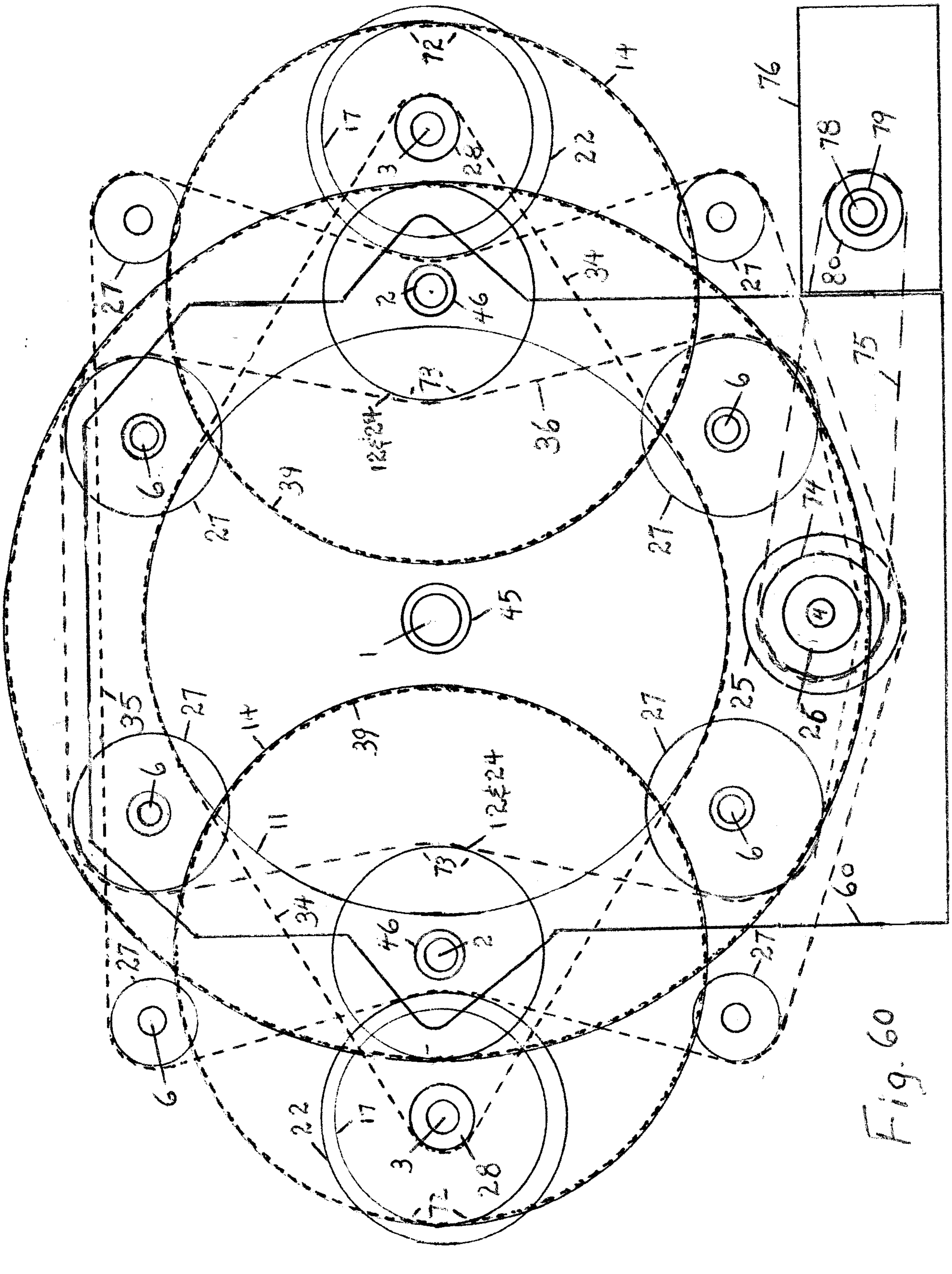
27
73
28
61
22
17
3
12
42

Fig. 59


72
17
3
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80
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12&24
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74
45
1
4
25
26
35
11
60

Fig. 60

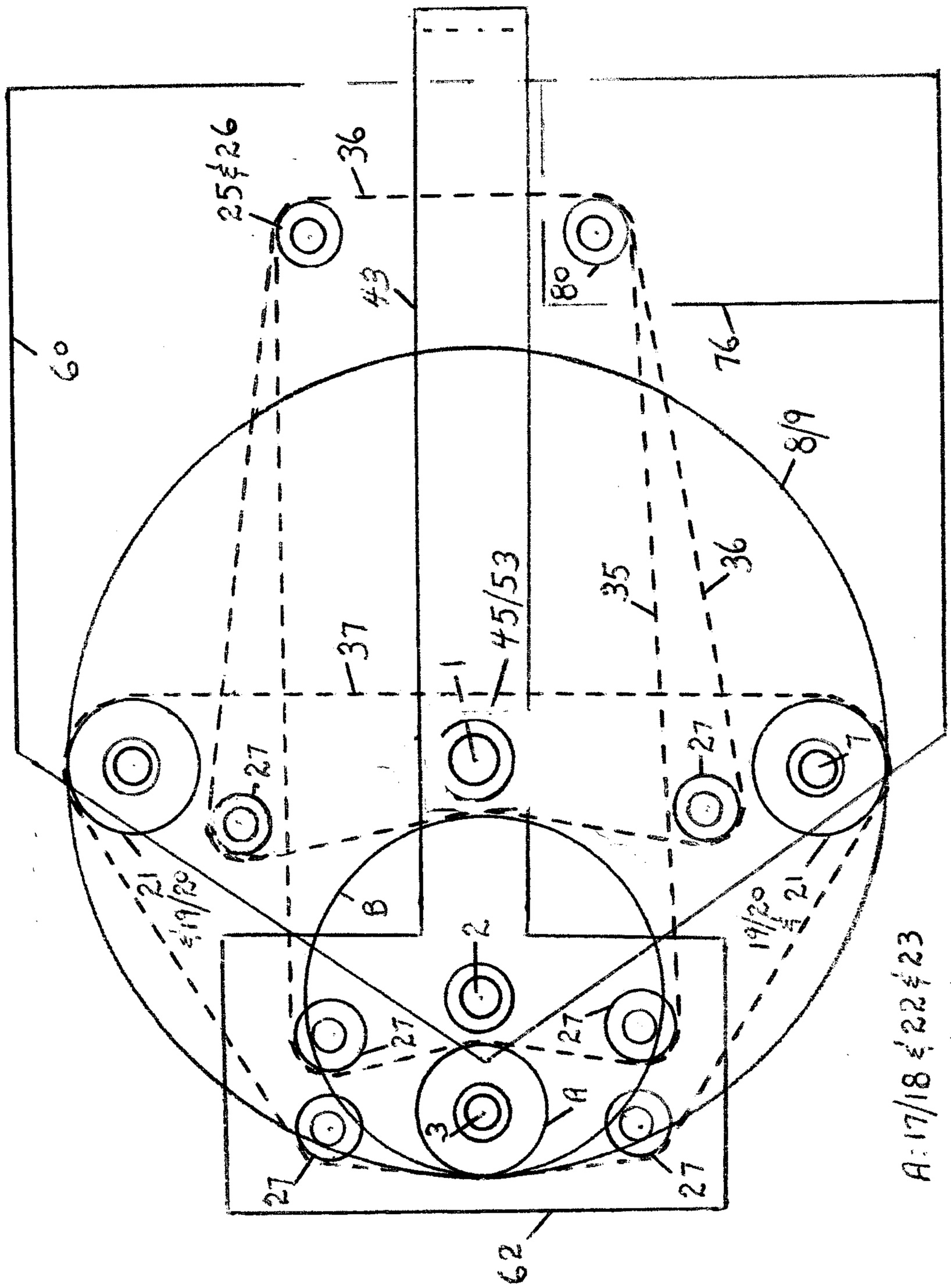
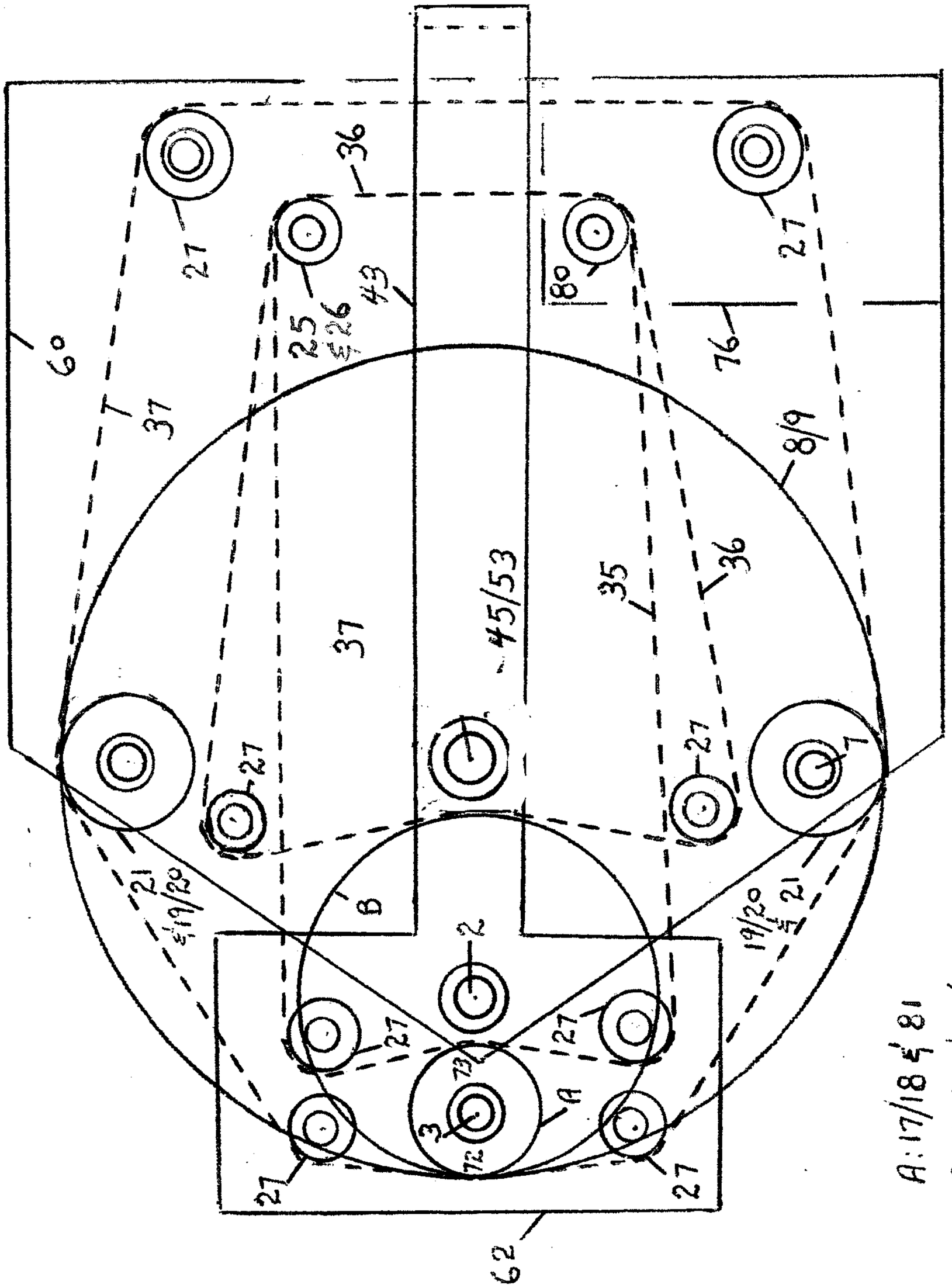

25≠26
36
43
80
76
8/9
6°
21
≠19/20
B
37
45/53
35
36
27
1
2
A
3
62
A: 17/18 ≠22≠23
B: 12/13≠14/15

Fig. 61


36
27
43
80
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60
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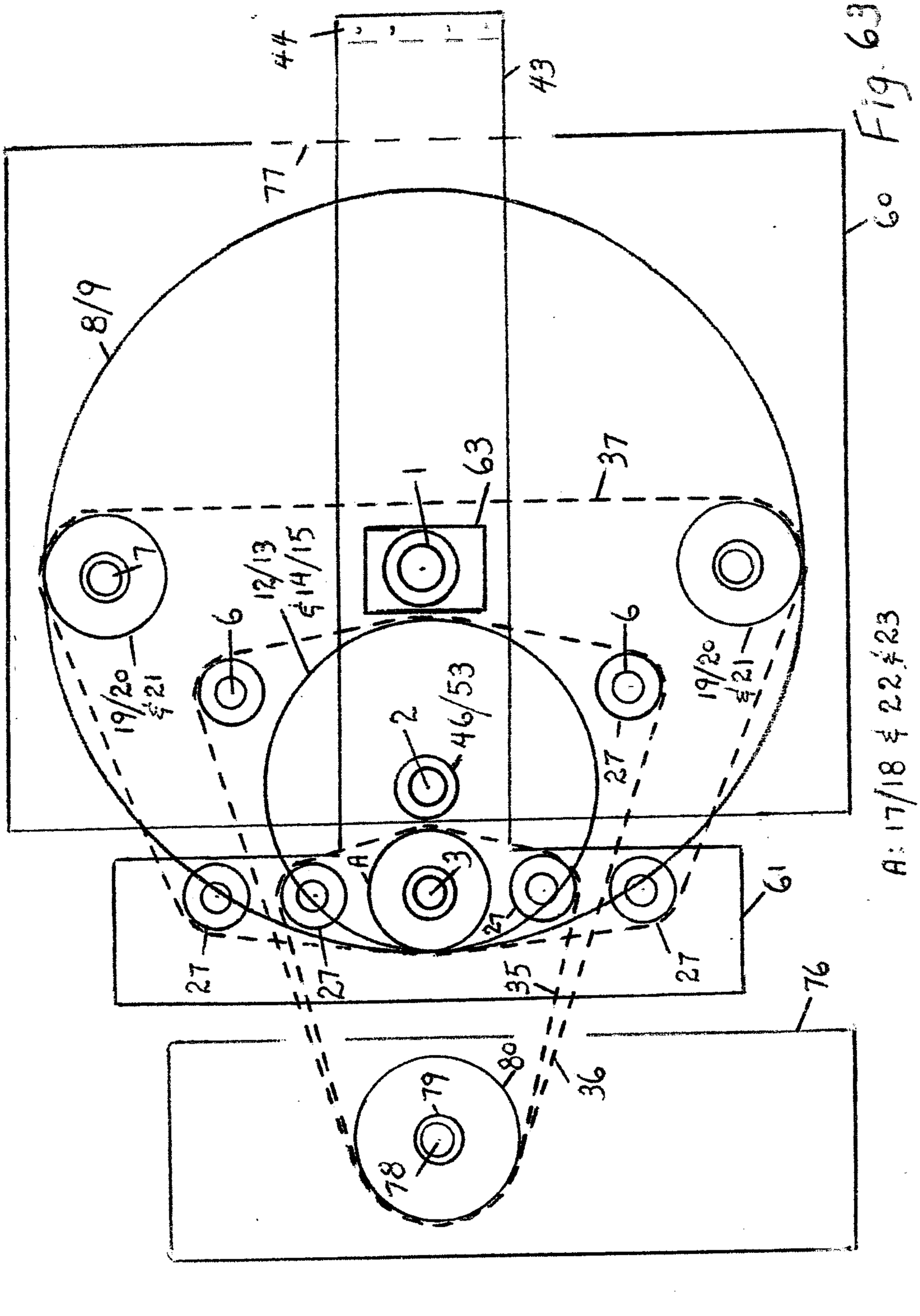
76
89
37
45/53
35
36
27
27
21
19/20
B
2
27
27
27
27
3
72
9
62
A: 17/18 & 81
B: 12/13 & 14/15

Fig. 62


44
43
77
60
8/9
37
63
7
6
12/13
14/15
19/20
21
46/53
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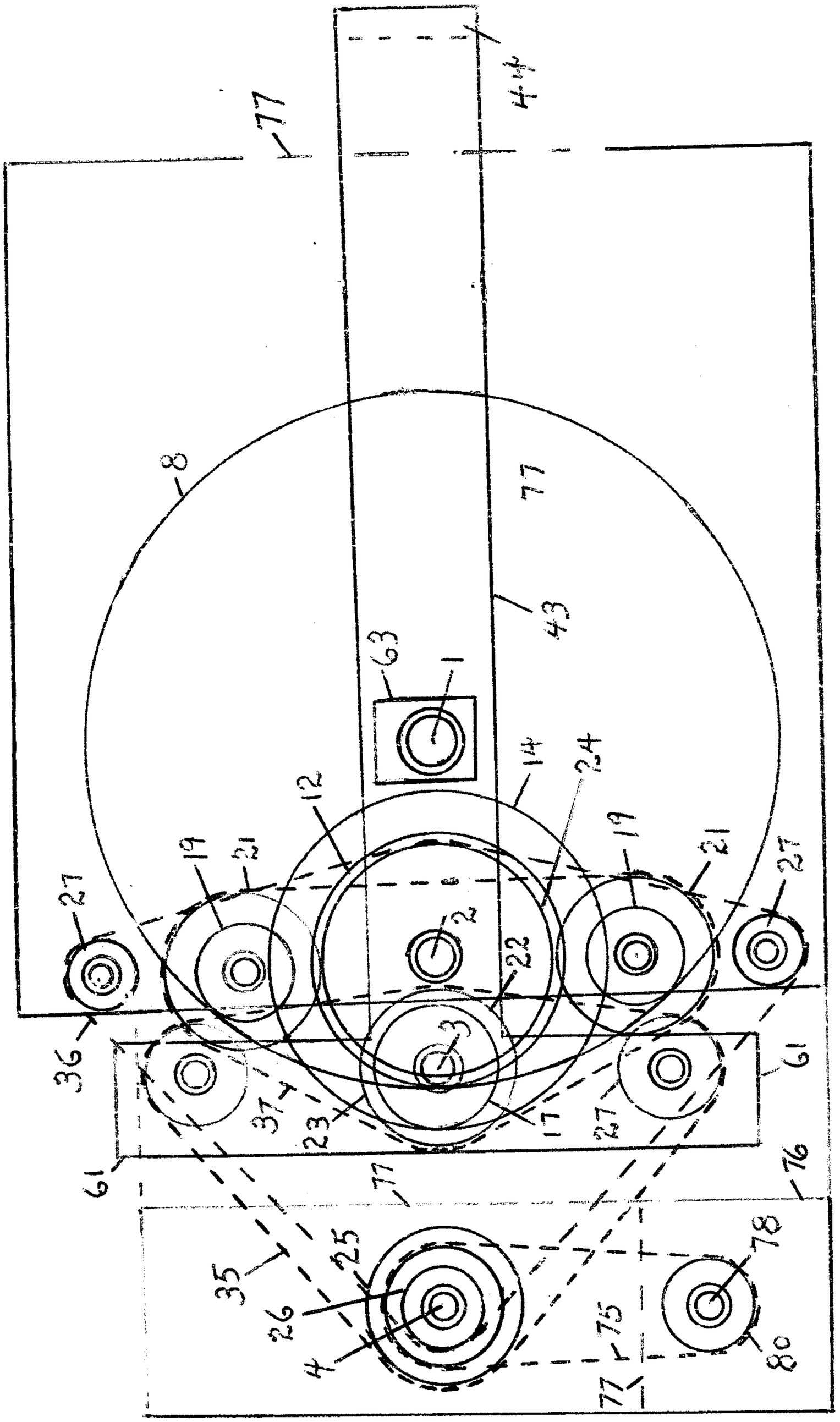
35
61
76
80
79
78
36
A: 17/18 22 23

Fig. 63


77
44
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76
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80

Fig 64

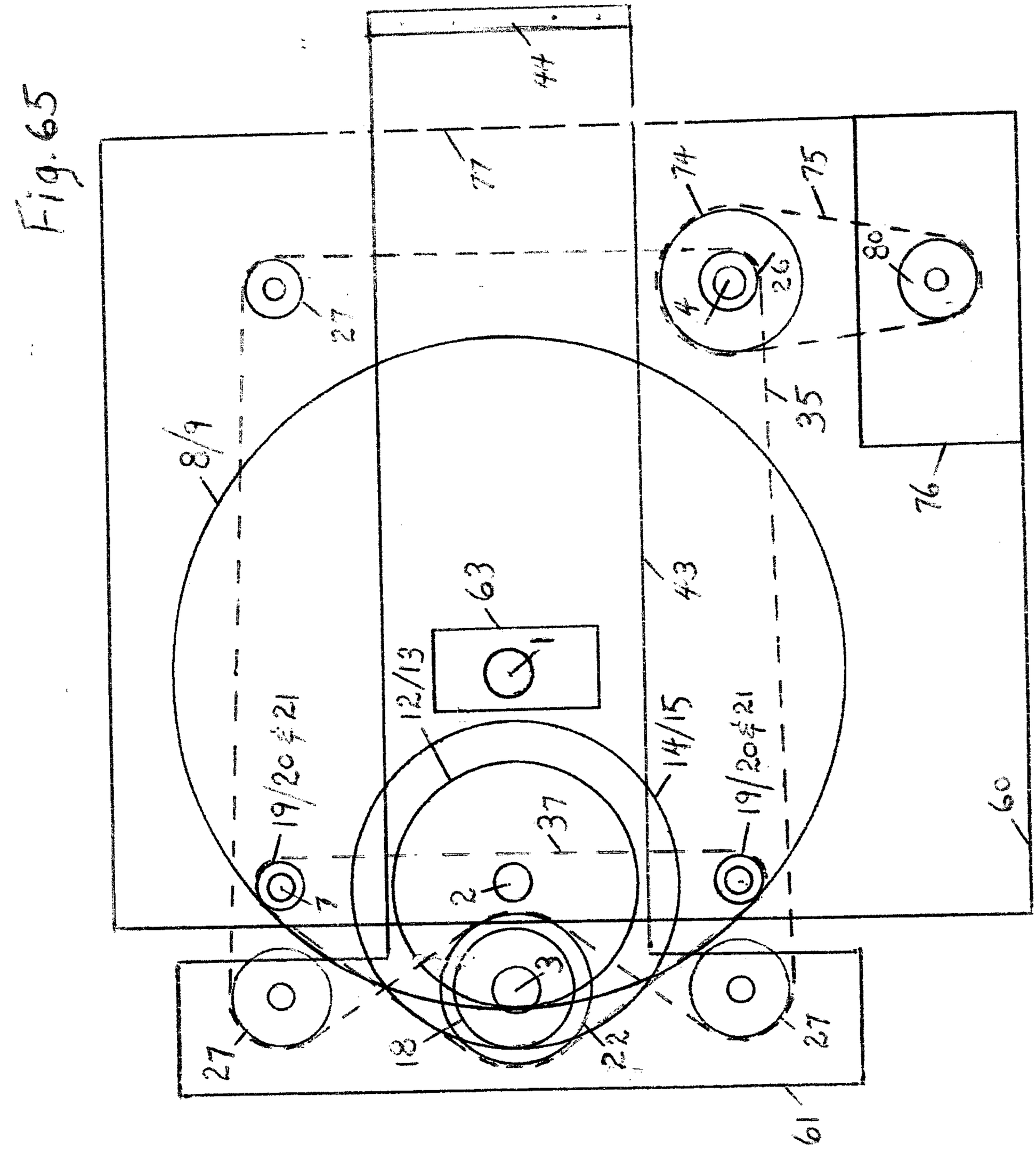
Fig. 19.65
44
27
74
75
4
23
80
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76
8/9
43
63
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12/13
19/20 & 21
14/15
37
2
7
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18
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27
60
61

Fig 66

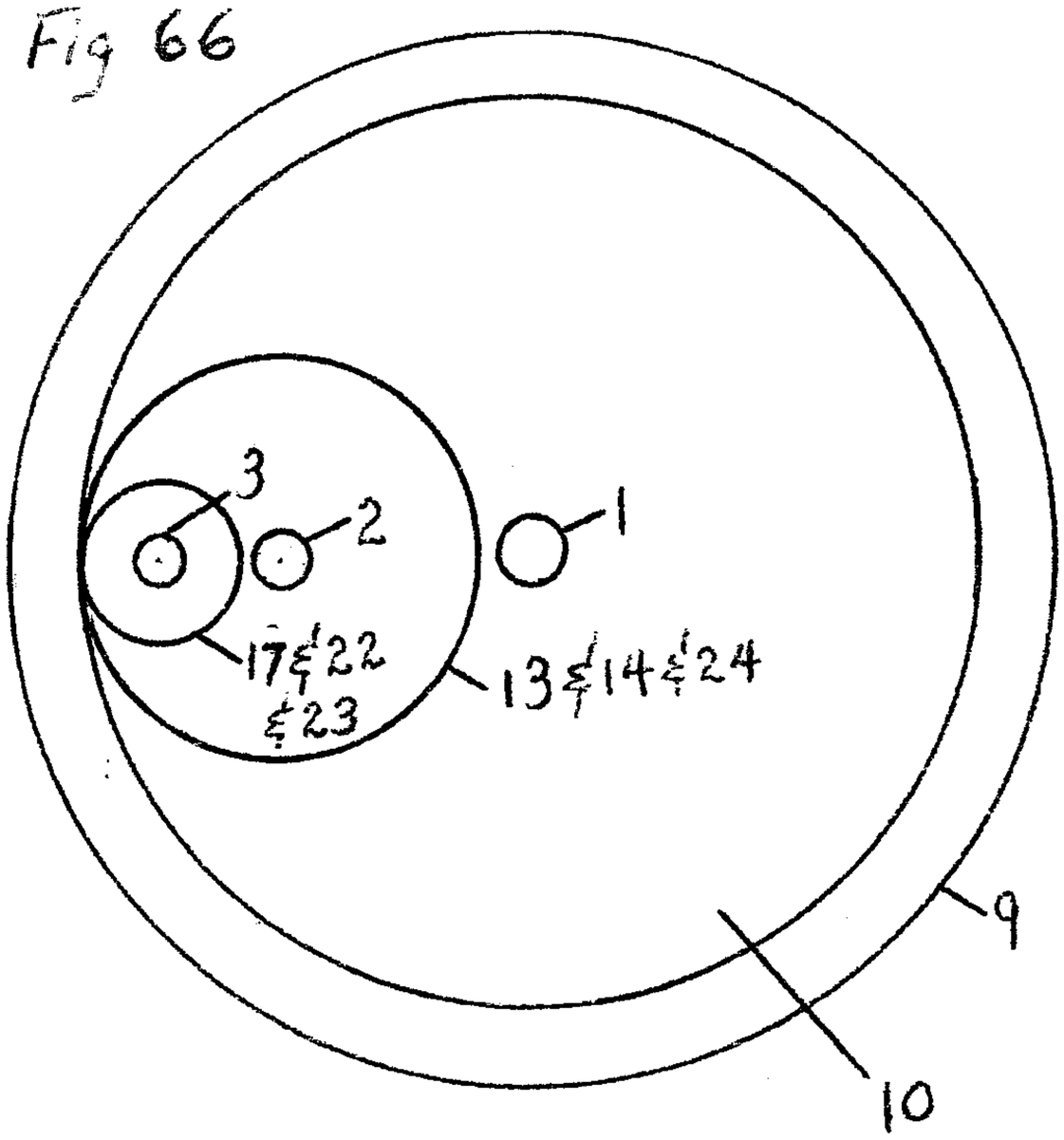


Fig 67

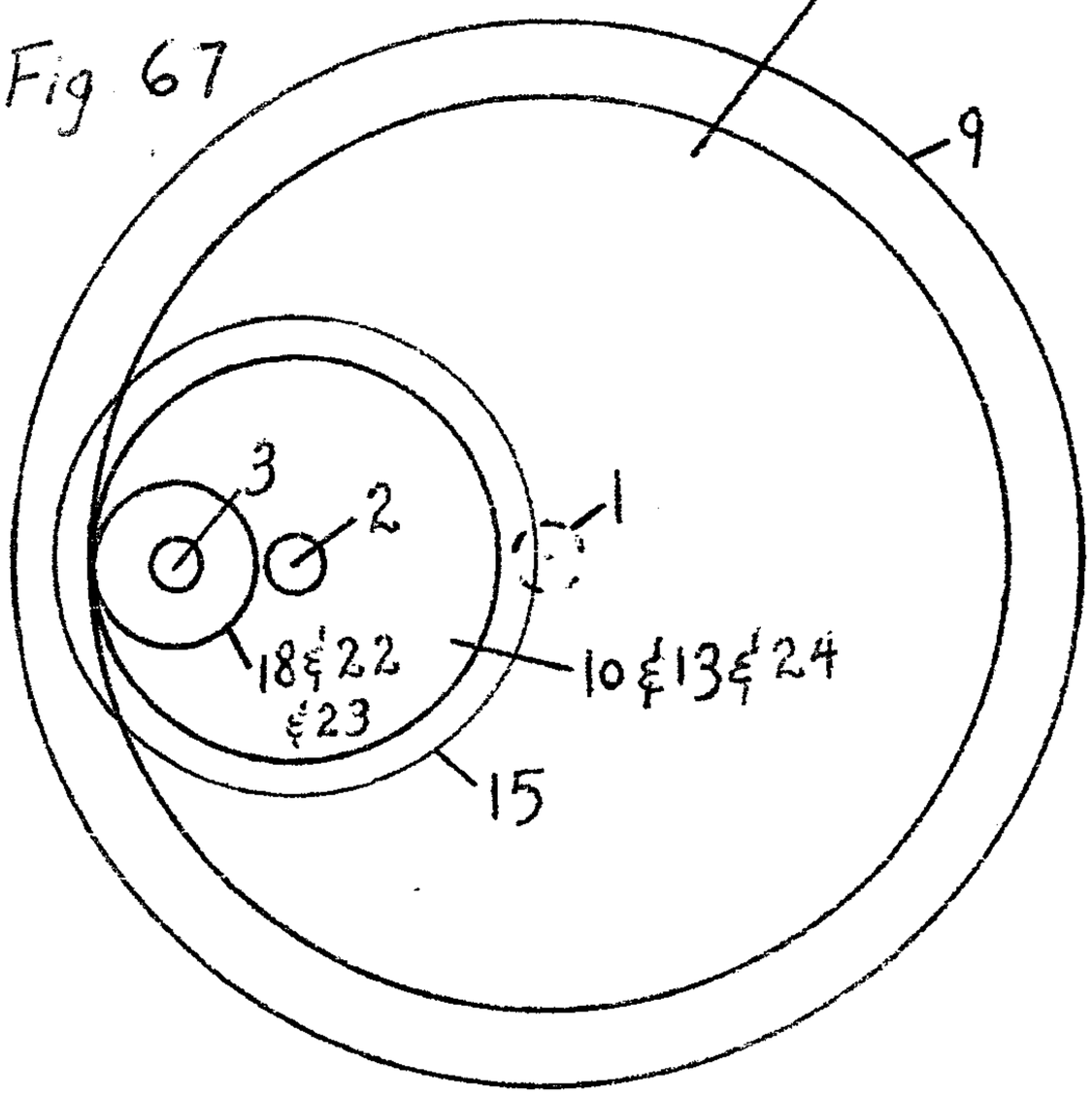


Fig 68

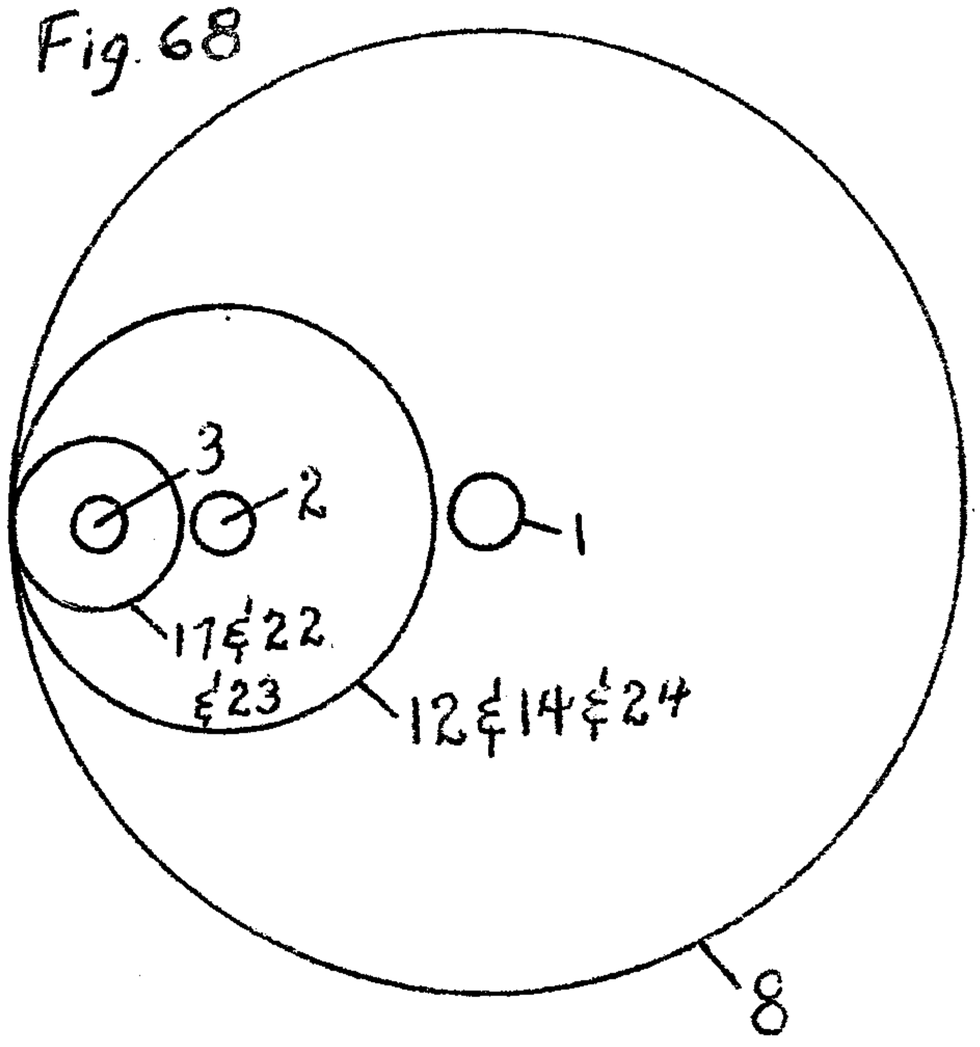
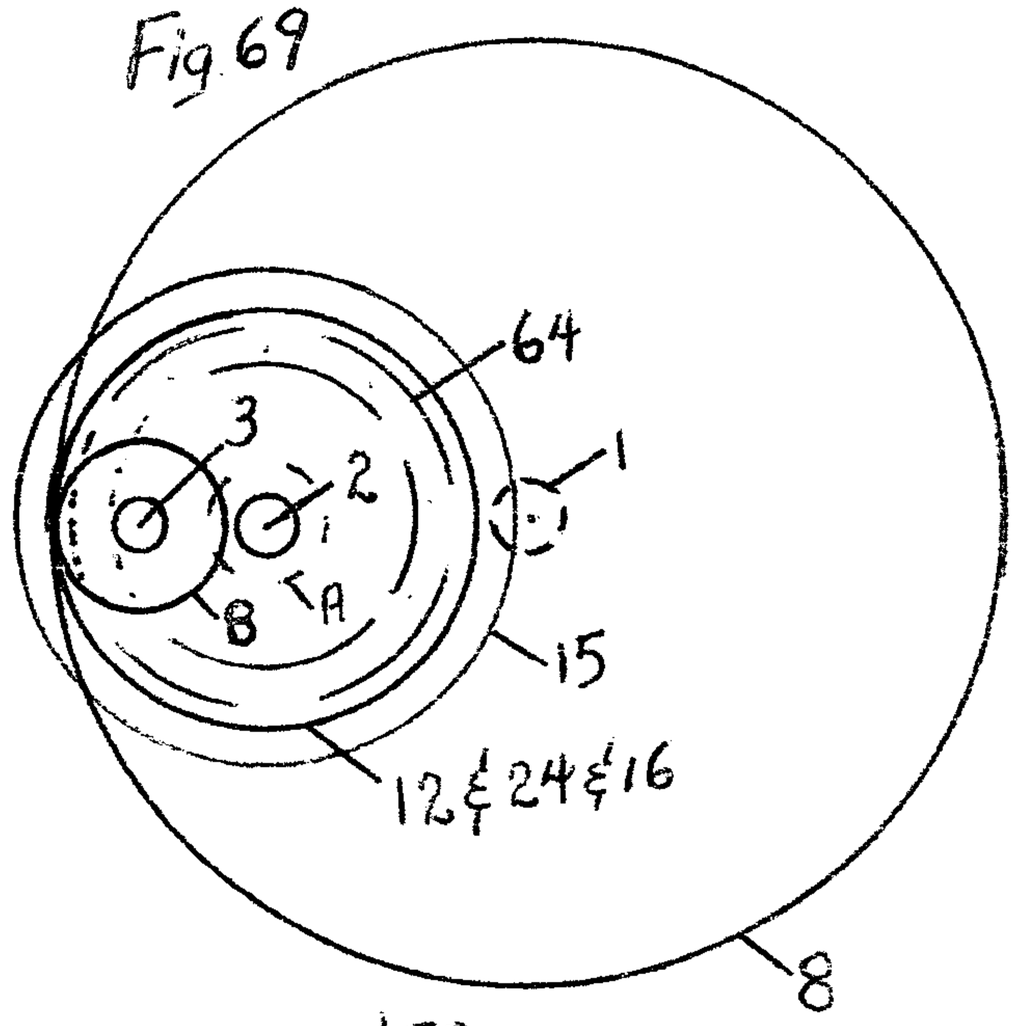


Fig 69



A: 46 & 53

B: 18 & 22 & 23

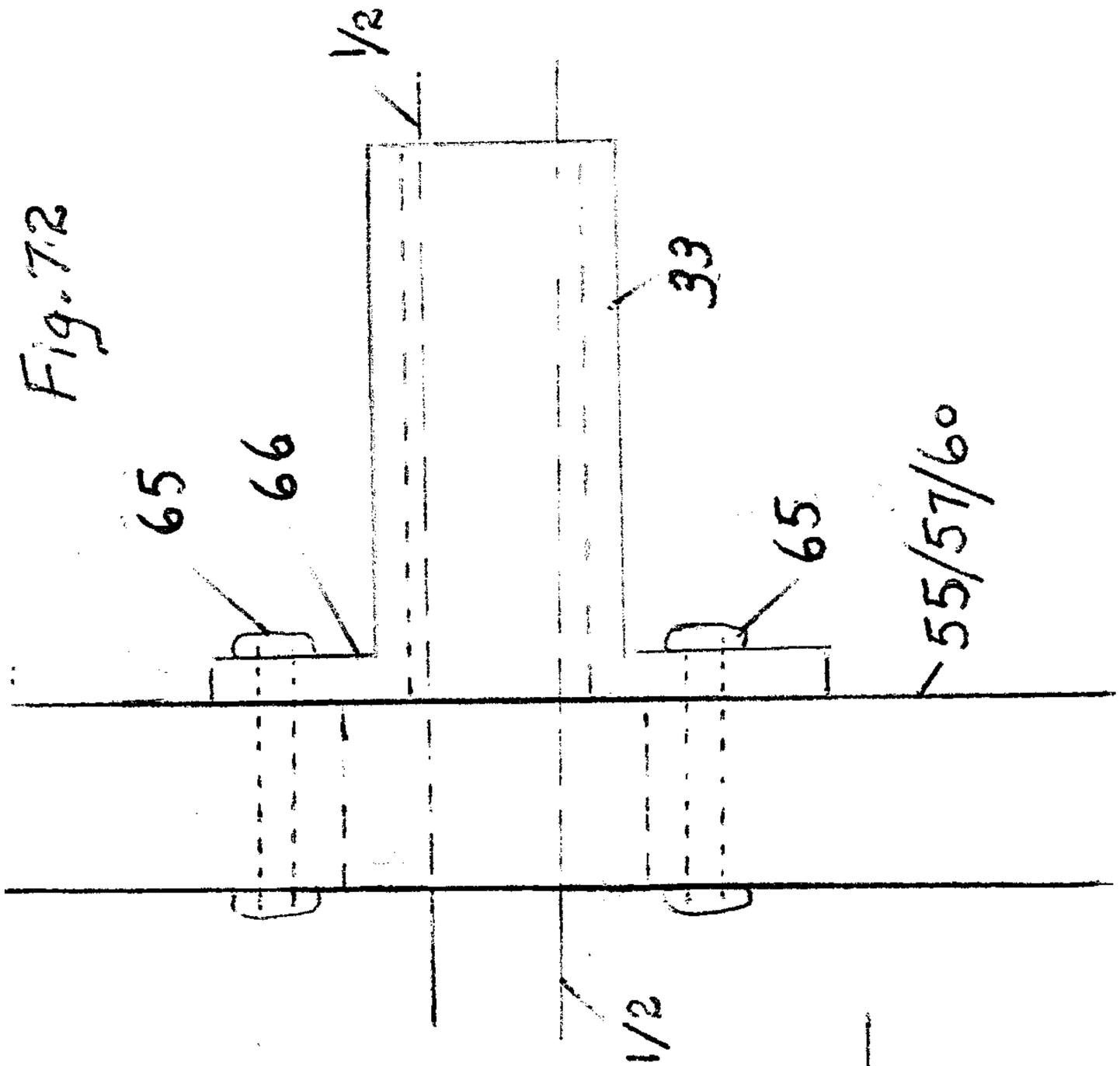


Fig. 72

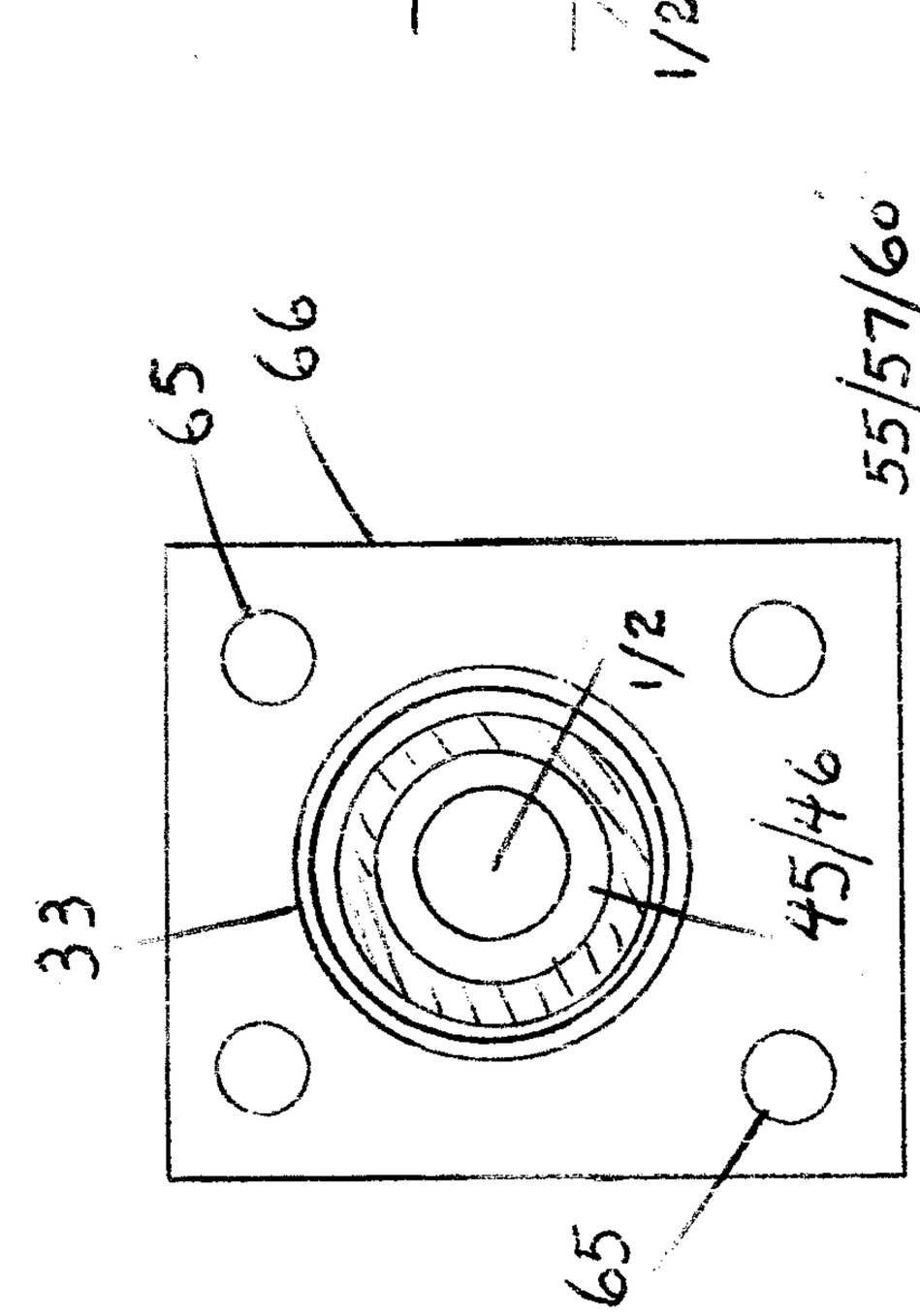


Fig. 70

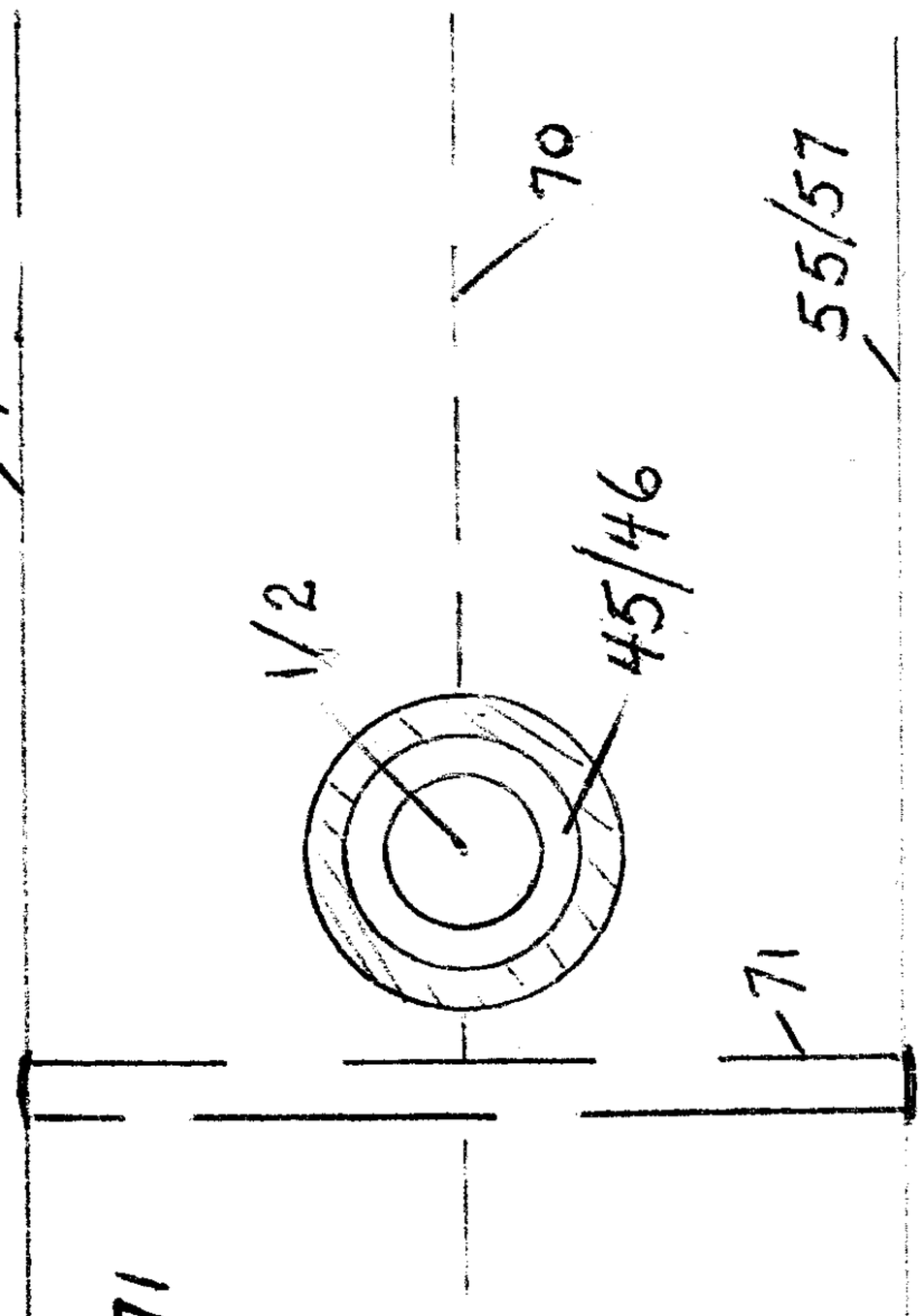


Fig. 71

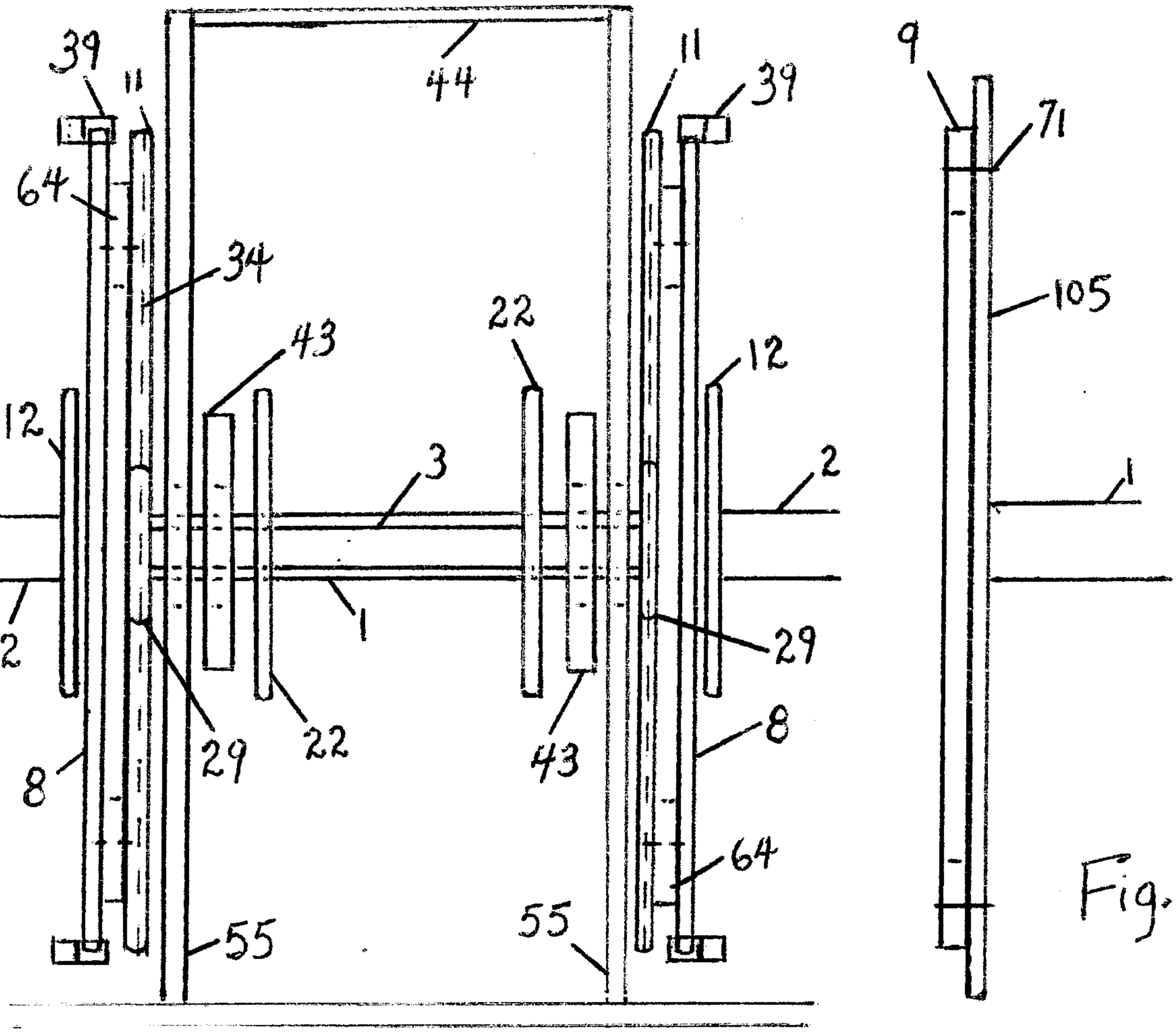
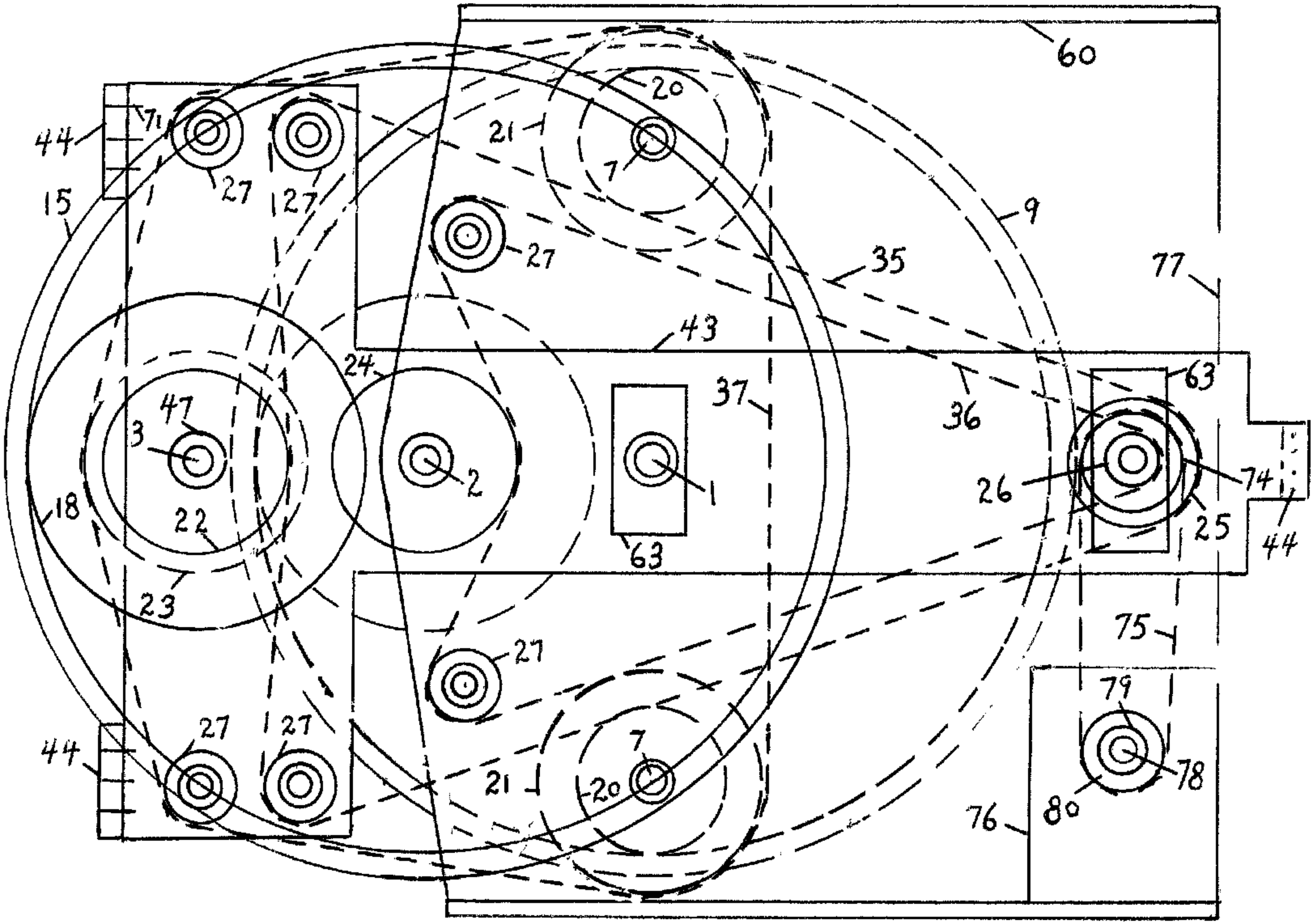


Fig. 73

Fig. 74


60
20
21
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127
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27
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77
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24
37
63
36
47
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26
74
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44
18
22
23
75
27
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79
44
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76