

March 31, 1942.

W. G. FLUHARTY

2,278,196

TAPE FEEDING APPARATUS

Filed July 30, 1940

2 Sheets-Sheet 1

FIG. 1

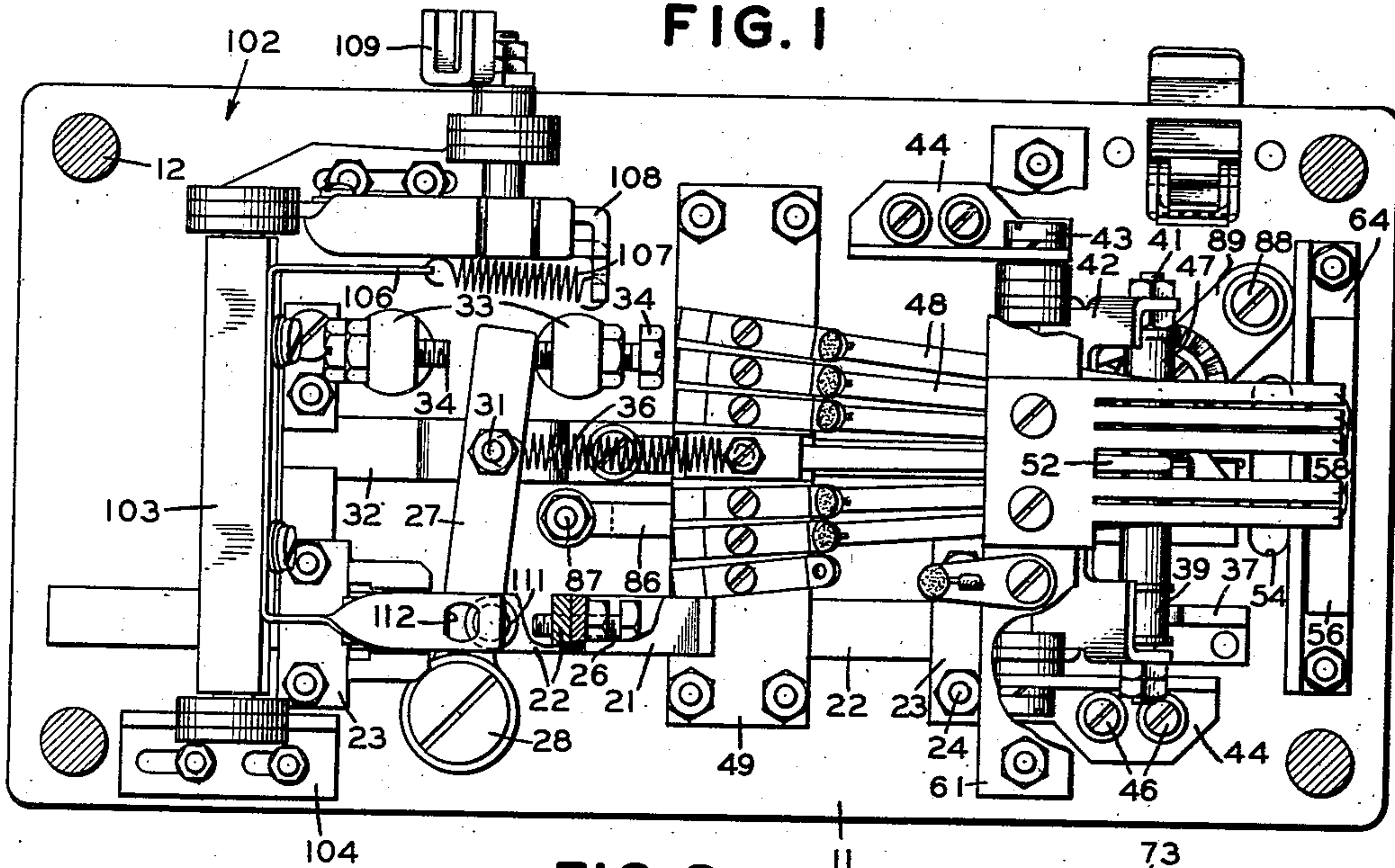


FIG. 2

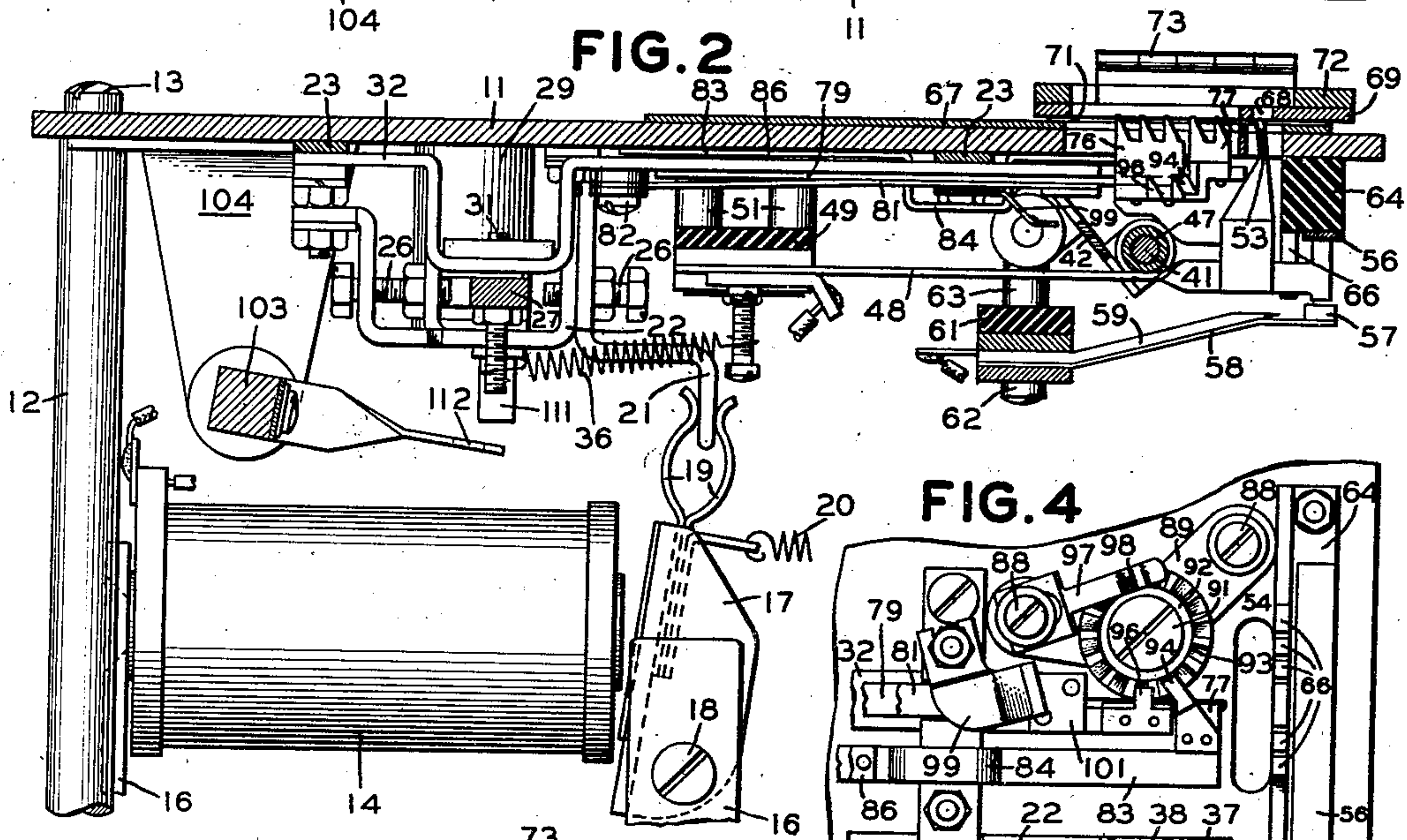


FIG. 3

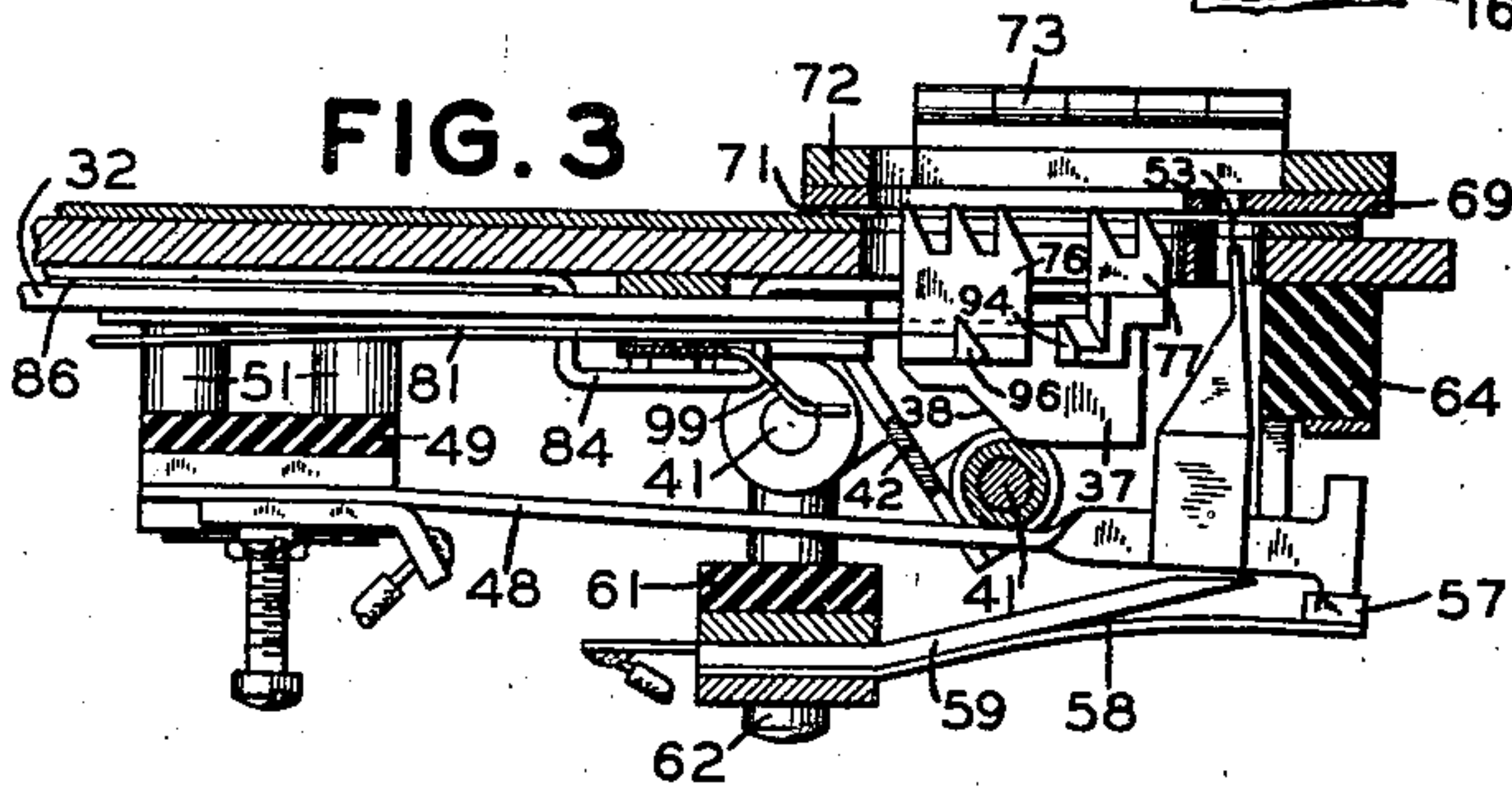
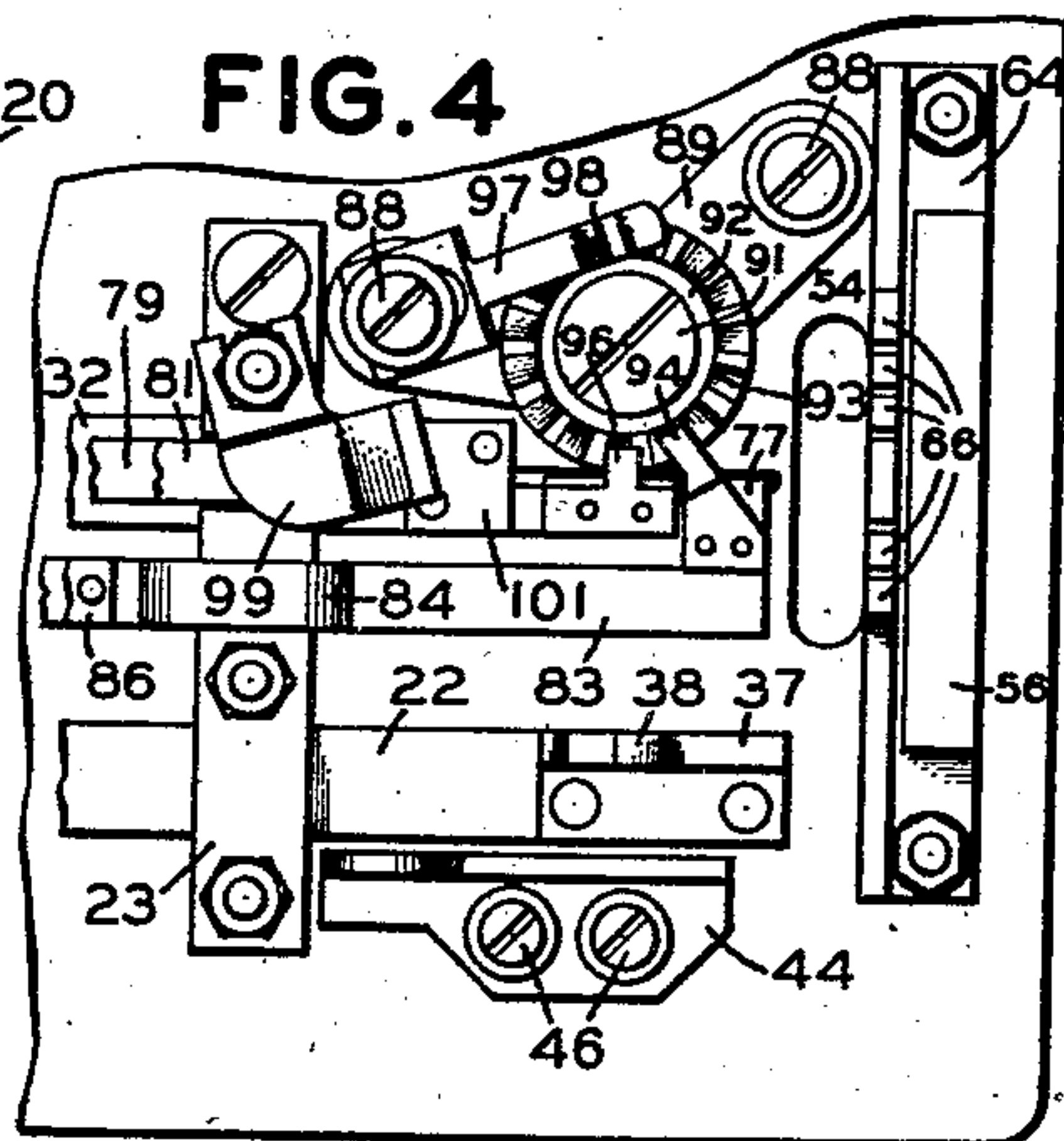


FIG. 4



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FIG. 5

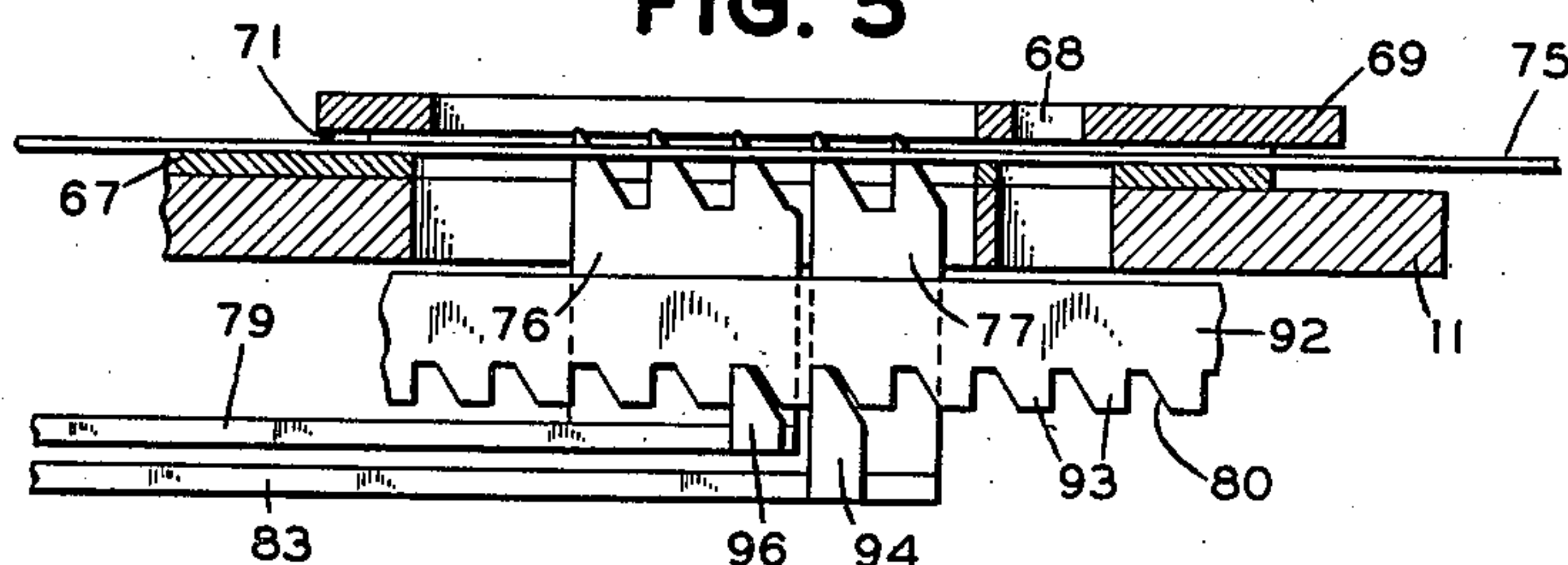


FIG. 6

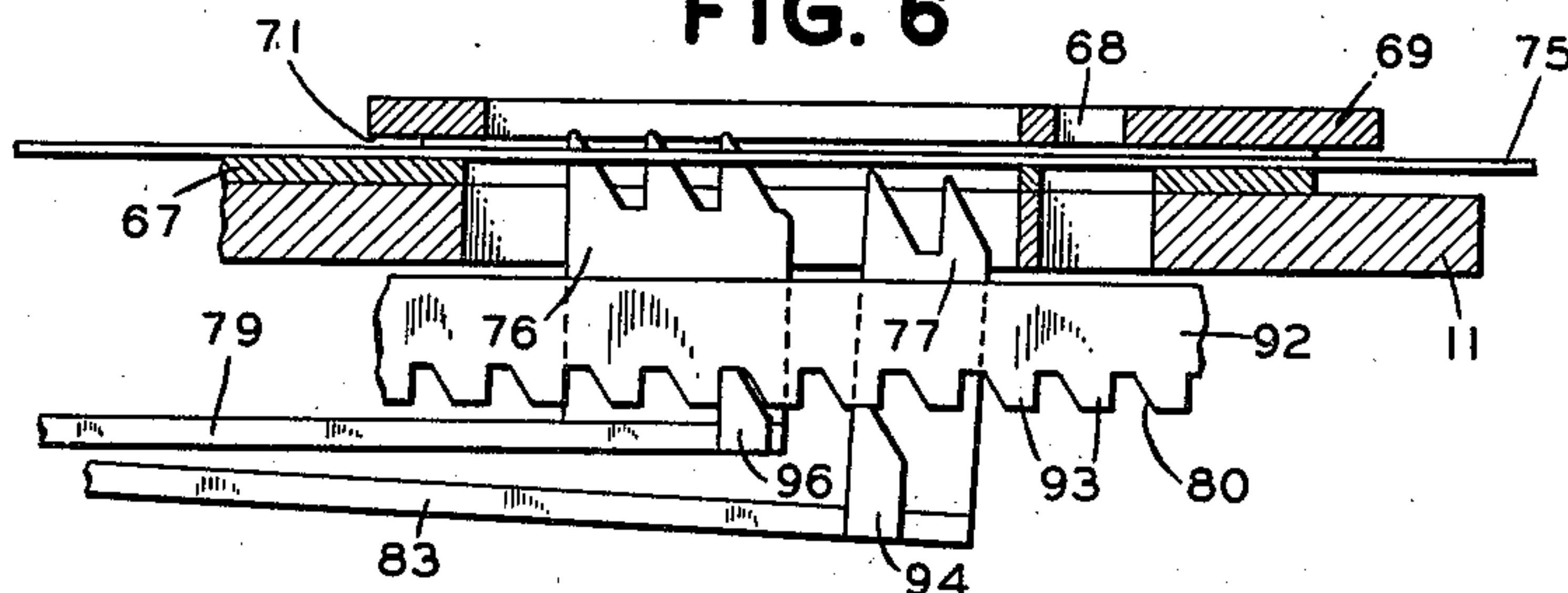


FIG. 7

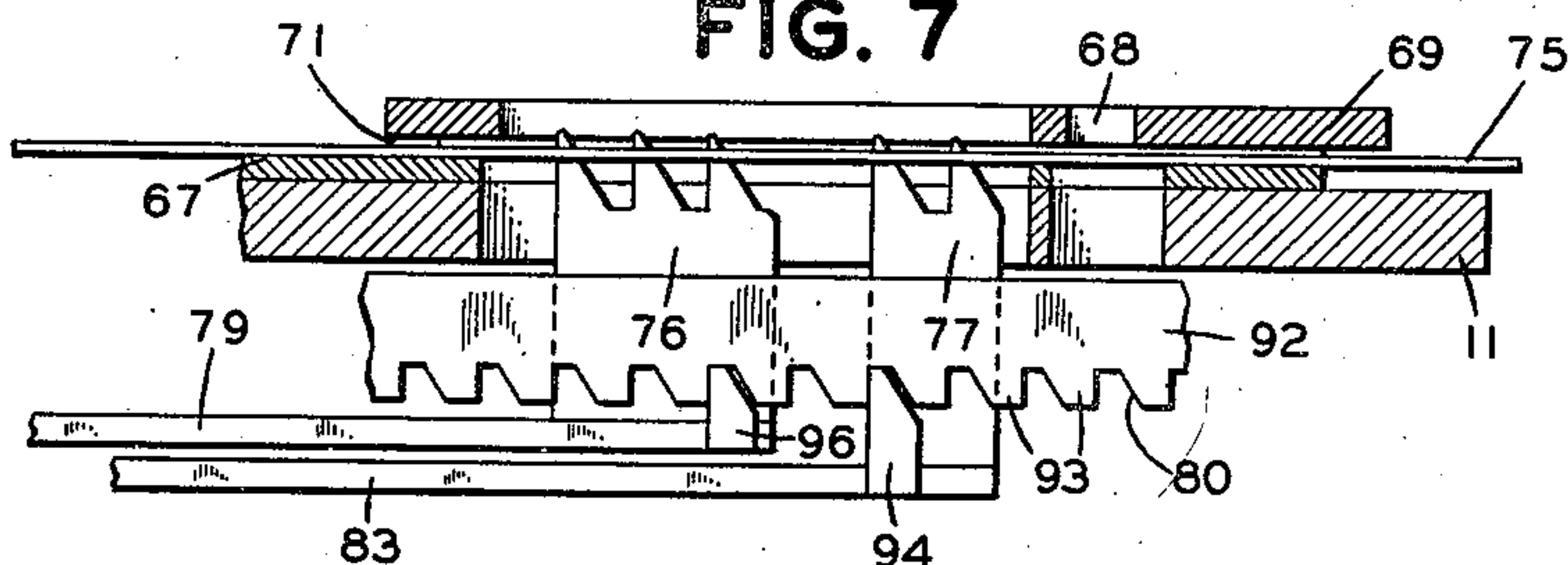


FIG. 8

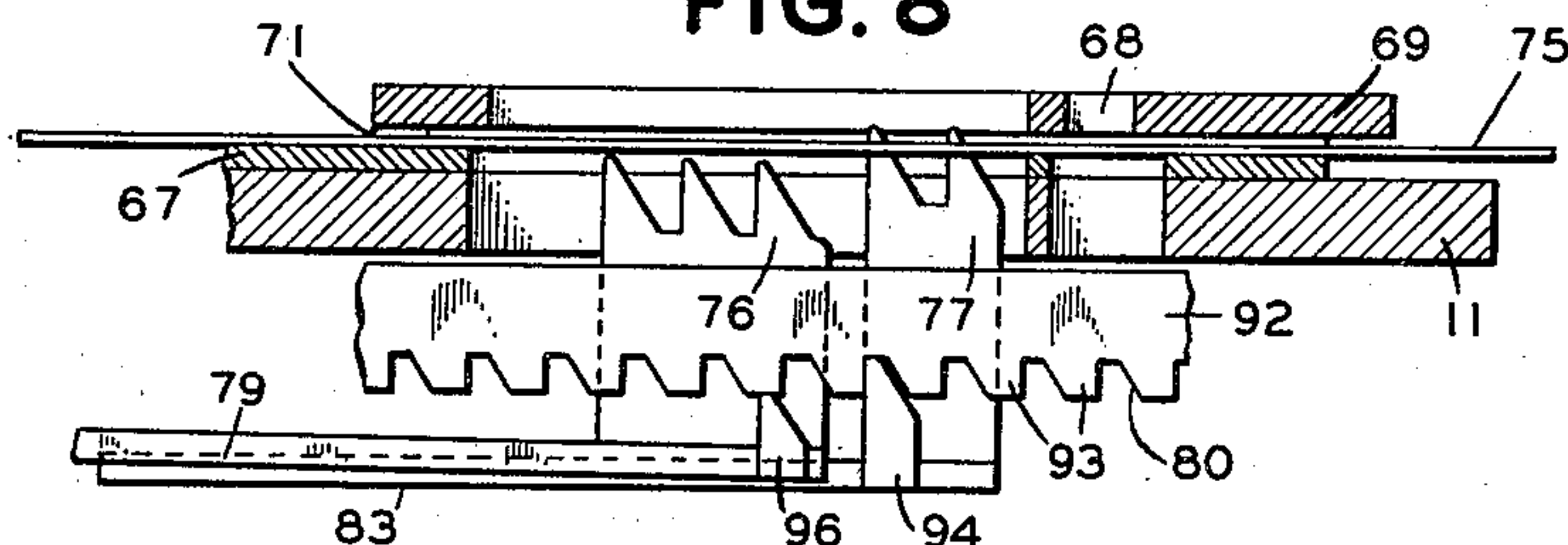
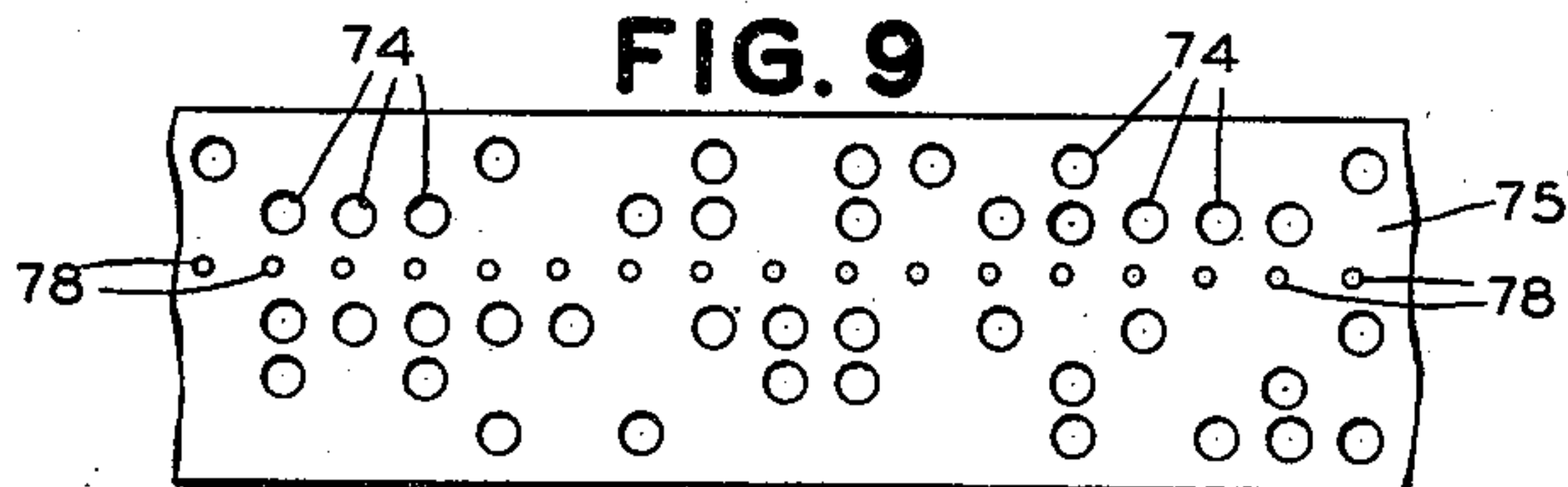


FIG. 9



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2,278,196

TAPE FEEDING APPARATUS

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Application July 30, 1940, Serial No. 348,355

9 Claims. (Cl. 271—2.5)

This invention relates primarily to tape feeding apparatus and more specifically to an improved tape feeding apparatus particularly adapted for use in telegraph tape transmitters, such as, for example, those of the type disclosed in a patent to H. Angel et al., No. 2,172,269, issued September 5, 1939. Although the invention is hereinafter described and shown in the drawings as being applied to a tape transmitter of the above type, it will be obvious that the application thereof is not limited to such transmitters but may be applied to various other mechanisms wherein a web or tape is intermittently advanced, such as, for example, in motion picture cameras and projectors.

In present-day telegraph systems more and more use is being made of perforated tape wherein signals are stored prior to the transmission thereof over a sending circuit. The storage tape usually is of relatively narrow width, in the neighborhood of three-quarters of an inch, and each transverse section thereof has holes perforated therein to represent, in accordance with a predetermined arrangement, a code group of signals. In addition to the code perforations, the tape has feed holes perforated therein to cooperate with tape feeding mechanisms in advancing the tape through the transmitter. The code perforated tapes are usually prepared by any one of well-known arrangements, such as manually operated keyboards or perforators operating in response to received signals.

In systems where perforated tapes are used for the storage of signals it is obvious that the tape is normally used but once, and in order to keep expenses at a minimum relatively thin and fragile tapes are employed. Accordingly, the tape feeding mechanism has to be designed so that the tape feeding holes are not ripped out or mutilated during advancement of the tape through the transmitter or the perforating mechanism.

In the above Angel et al. transmitter toothed members are employed which cooperate with the feed hole in the tape to advance the same and which also maintain the tape in registry with the tape sensing means between advancing operations. One of the above-mentioned toothed members oscillates back and forth to advance the tape while another one holds the tape in position during the back stroke of the first toothed member. During the back stroke of the first toothed member the tape forces the teeth thereof out of engagement with the tape, while during advancement of the tape the teeth of the retaining toothed member are forced out of engagement

with the feed holes by movement of the tape. Thus, it may be seen that a considerable force is applied to the tape in movement thereof through such transmitters and therefore requires the employment of a relatively expensive tape to prevent the feed holes from being torn.

In view of the above, it is one of the primary objects of the present invention to provide an arrangement for feeding tapes by toothed members such as those described above, wherein the disengagement of the toothed members from the tape is independent of the strength of the tape.

In accordance with the above, it is a further object of the invention to provide means for positively camming the oscillating toothed member out of engagement with the tape on the back stroke thereof and to cam the teeth of the second or retaining toothed member out of engagement with the tape during the advancement of the tape by the first toothed member.

Other objects of the invention reside in its simplicity, ease of operation, low cost, and the ease with which it can be attached to existing transmitters, such as those of the Angel et al. type.

These and other objects of the invention will appear from the following description of an illustrative embodiment thereof. In order that the invention may be more readily understood, reference will be made to the following detailed description and drawings, in the latter of which:

Fig. 1 is a view looking at the bottom of the top plate employing a transmitter of the above-mentioned type;

Fig. 2 is a vertical sectional view through the center of the transmitter showing the principal parts thereof;

Fig. 3 is a view of some of the elements of Fig. 2 in an operated position;

Fig. 4 is a view showing the cooperation of the elements of the invention with some of those of the transmitter;

Figs. 5, 6, 7 and 8 are views showing diagrammatically the manner in which the toothed members of the tape transmitter operate to advance the tape as controlled in accordance with the invention; and

Fig. 9 is a face view of a piece of tape showing the arrangement of the feed holes and code representing holes therein.

Referring first to Figs. 1 and 2, transmitter will be seen to comprise a top plate 11 over which the perforated tape is arranged to pass, in a manner hereinafter described, through appropriate guide members. The top plate is supported and spaced the desired distance from a

bottom plate or base (not shown) by posts such as 12. The top plate is secured to the tops of the posts 12 by screws such as 13, and the bottom ends of the posts 12 are secured to the base. With the exception of an operating magnet 14, Fig. 2, and the associated armature, all the major operating elements of the transmitter are secured to the under side of the top plate 11. Thus, the parts of the transmitter are readily accessible for repairs, adjustments, etc. by merely removing the top plate 11. The operating magnet 14 is supported from a bracket 16 and has in operative relation with the pole pieces at the right hand end thereof an armature 17. The armature 17 is pivotally mounted on shoulder screws such as 18 in a section of the bracket 16 adjacent the armature.

Extending upwardly from the armature 17 are two bent fingers 19 which are adapted to engage the lower end of a bent bar 21 to operate the transmitter in a manner hereinafter set forth. Also attached to the armature 17 is a retractile spring 20. On energization of the magnet 14, the armature 17 pivots in a counter-clockwise direction to increase tension in the spring 20 and on deenergization of the magnet the spring returns the armature to its unoperated position. The only connection between the operating elements attached to the under side of the top plate 11 and the base plate is through the bar 21 and the fingers 19. Thus, the top plate may be lifted off by merely removing the screws 13 holding the same to the posts 12.

The bar 21 is attached to an arched section of a slide bar 22 which is guided for longitudinal movement by suitable guide blocks 23 secured to the under side of the top plate 11 by screws such as 24. The arched section or portion of the slide bar 22 carries adjustable stop screws 26 which cooperate with the sides of an arm 27 pivotally mounted on a shoulder screw 28. The shoulder screw 28 is supported in a collar 29 attached to the under side of the top plate 11. The adjustments of the adjusting screws 26 are such that the arm 27 pivots during reciprocating movement of the slide bar 22 with some lost motion between the two for purposes hereinafter apparent.

Pivotally attached adjacent the free end of the arm 27 by a stud 31 is a tape advancing bar 32. The tape advancing bar is connected to the arm 27 in an arched portion thereof and is also guided for longitudinal movement by the guide blocks 23. Studs such as 33 have adjusting screws 34 therein which cooperate with the free end of the arm 27 to limit the movements thereof. Thus, through the above described elements the bars 22 and 32 slide to the left on energization of the operating magnet 14 and on deenergization thereof slide to the right. A spring 36 attached to the stud 31 on the arm 27 assists in the movement of the arm 27 and the feed bar 32 to the right. The operations performed by the bars 22 and 32 in sliding from one position to the other will hereinafter appear.

Secured to the right hand end of the slide bar 22 is a member 37, Fig. 1 to 4, which has a sloping surface 38 thereon. The sloping surface 38 cooperates with a roller 39 pivotally mounted on a rod 41 carried in the free ends of a pivoted bracket 42. The bracket 42 is pivotally mounted on screws such as 43, Fig. 1, supported in brackets 44 attached to the underside of the top plate by screws 46. The rod 41 carries thereon a sleeve 47 of insulating material, such as glass or fiber,

which cooperates with a set of tongues 48. The tongues 48 are insulatively and separately supported from one another in an insulating block 49 spaced by spacers 51 a slight distance below the top plate 11. The tongues 48 together with a finger 52 are made of spring material and engage the sleeve 47 and tend to pivot the bracket 42 in a counterclockwise direction, as shown in Figs. 2 and 3.

On movement of the slide bar 22 from its right hand to its left hand position by the energization of the operating magnet 14, the sloping surface 38 on the member 37 at the right hand end of the slide bar engages the roller 39 to pivot the bracket 42 in a clockwise direction. This pivoting of the bracket 42 through the sleeve 47 flexes the tongues 48 and finger 52 to lower feeler or sensing pins 53 adjacent the right hand ends of the tongues. The feeler pins 53 extend through a slot or opening 54 in the top plate 11 and cooperate with the perforated tape in a manner hereinafter described. The downward flexing of the tongues 48 also removes the upper arms of the T-shaped ends thereof from engagement with a bus bar 56 and places the downwardly extending arm of the T-shaped ends in contact with associated individual contacting elements 57. The contact elements 57 are supported on the free right hand ends of individually associated spring arms 58 and associated with each of the spring arms 58 are relatively rigid stops 59 to prevent excess flexing of the spring arms 58 in an upward direction. The spring arms 58 and the stops 59 are attached to an insulating block 61 by screws 62 which in turn is supported by spacing collars 63. The bus bar 56 is attached to the under side of an insulating member 64 which also has a series of depending fingers 66 which separate and guide the tongues 48 adjacent the free right hand ends thereof. On the return of the slide bar 22 from its left to its right hand position, the sloping surface 38 permits the flexible tongues 48 and finger 52 to pivot the bracket 42 in a counterclockwise direction, whereupon the tongues, if not blocked by a solid section in the tape in operative relation therewith, return to their upper positions.

With the tongues 48 in their normal or upper positions, the sensing fingers 53 associated therewith extend through the opening 54 of the top plate 11 and also through a tape guide 67 and into an opening 68 in a tape hold-down plate 69, Figs. 2 and 3. The hold-down plate 69 is positioned a slight amount above the guide plate 67 to form a space 71 therebetween through which the tape passes. The hold-down plate 69 together with a plate 72 are hinged at 73 to the top plate 11. The hinge 73 permits the hold-down plate 69 to be lifted from the guide plate 67 to assist in threading the tape through the transmitter. With a tape in the transmitter and a section thereof over one of the sensing pins 53 without a perforation therein, the sensing pin is prevented from rising and in turn holds the tongue 48 in a down position. When a tongue 48 is thus held down, the upper end of the T at the right hand end thereof is not permitted to contact the bus bar 56 while the lower arm of the T remains in contact with its associated contacting element 57. Similarly, when perforations in the tape such as 74, Fig. 9, are positioned over the sensing pins 53, the tongues 48 are permitted to flex to their upper position, and in such a position the upper arm of the T at the right hand end thereof is in contact with the bus bar 56 and the lower arm disengaged from the associated

in the tape 75 in a position such as that shown in Fig. 5.

Thus, from the above it is evident that during the leftward movement of the operating toothed member 76 the toothed member 77 is withdrawn from engagement with the tape while the tape is being advanced. Following the advancement of the tape 75 the proper distance, the teeth of the retaining toothed member 77 reengage the tape to retain the same in position during the return movement of the operating toothed member 76, the teeth of the retaining toothed member 76 being positively cammed out of engagement with the tape during the return movement thereof. As the disengagement of the teeth of the toothed members 76 and 77 from the feed holes in the tape is positive and independent of the recording tape 75, a thinner and cheaper tape may be employed without the danger of ripping the tape between feed holes during the return movement of the operating toothed member 76 by the teeth thereof or by the teeth of the retaining toothed member 77 during advancement of the tape. In addition, a comparatively strong means may be employed to bias the toothed members to their upper positions, as the downward movement thereof is positive and wholly independent of the strength of the recording tape 75.

The amount of movement of the operating toothed member 76 is substantially the same as the distance between successive teeth on the disc 92, and accordingly the disc is rotated one tooth on each leftward movement of the bar 79. The spacing of the feed holes 78 in the recording tape 75 is also arranged in accordance with the movement of the toothed member 76 so that the tape is advanced the distance between two successive feed holes on each operation of the transmitter.

Following the movement of the operating toothed member 76 back into its normal right hand position, the slide bar 22 moves into its right hand position and, as above described, allows the sensing pins 53, Fig. 1, to move upward into engagement with a new transverse row of perforations in the tape 75. The sensing pins 53 in operative relation with a perforation in the tape allow the associated tongue 48, Fig. 2, to contact the bus bar 56 while the tongues whose sensing fingers 53 are blocked in their upward movement by a solid section in the tape in operative relation therewith remain in contact with associated contacting elements 57. Thus, in a complete cycle of operation of the transmitter, the sensing pins 53 are first withdrawn from engagement with the perforated tape and then the tape is advanced. Following the tape advancing operation, the sensing pins 53 reengage the tape at the next transverse row of perforations to be positioned in accordance therewith and while the pins are thus positioned a representative group of signals is transmitted by well-known mechanisms, such as distributors.

It will be noted, as shown in Figs. 5 to 8, that the right hand side of the teeth on the toothed members 76 and 77 are sloped at substantially the same angle as the left hand side of each tooth 93 on the disc 92. Accordingly, during movement of the tape 75 by the operating toothed member 76 the teeth of the retaining toothed member 77 are withdrawn from the feed holes of the tape 75 at such a rate that the right hand sides of the teeth on the toothed member 77 have no tendency to rip the feed holes. That is, the

rate of advancement of the recording tape 75 relative to the downward movement of the teeth of the retaining toothed member 77 is such that the tape does not tend to move the toothed member downward. Similarly, the teeth of the operating toothed member 76 are cammed out of engagement with the tape 75 during the return movement thereof at such a rate that the teeth do not have a tendency to rip the tape 75.

A spring member 97, Fig. 4, attached to the top plate by one of the screws 88 has a bent section 98 adjacent the free end thereof which cooperates with the notches or teeth of the disc 92 to jockey the same in its operated positions and prevents movement thereof at undesired times. A second spring member 99 attached to the under side of the top plate 11 cooperates with a block 101 riveted to the bar 79 to prevent the inertia of the disc 92 from camming the pawl 96 out of engagement with the disc at the end of a leftward movement of the operating toothed member 76. This insures that the disc 92 is only rotated one tooth on each operation of the operating toothed member 76 and accordingly the tape is advanced never more than one feed hole at a time.

In order to provide for locking the transmitter with the sensing fingers 53 in their down position which corresponds to the energized position of the operating magnet 14, a locking mechanism is provided which is illustrated in its unoperated position in Figs. 1 and 2. The locking mechanism, indicated in general by reference numeral 102, comprises a pivoted bar 103 supported in brackets 104 which have attached thereto a U-shaped member 106. The upper end of the U-shaped member 106 has a jockey spring 107 attached thereto, the other end of which is attached to an arm 108 arranged for operation by a thumb lever 109. On operation of the thumb lever 109 to one of its operated positions, the jockey spring 107 pivots the bar 103 so that the lower arm of the U-shaped member 106 is brought into operative relation with a pin 111 movable with the slide bar 22. The lower arm of the member 106 has a hole 112 therein, and when the slide bar 22 moves to its left hand position the hole 112 engages the pin 111 to prevent return movement of the slide bar 22. Thus, the transmitter may be locked in an operated position with the sensing pins held down by proper operation of the thumb lever 109.

It is obvious, of course, that various modifications of the invention and various other applications thereof may be made without departing from the spirit or essential attributes thereof, and it is desired, therefore, that only such limitations be placed thereon as are imposed by the prior art or are specifically set forth in the appended claims.

What is claimed is:

1. In a tape transmitter, a control tape, a cyclically operable tape advancing member, a tape retaining member, magnetic means for operating said tape advancing member to advance said tape, means operative by said tape advancing member independent of said tape for moving said tape retaining member out of engagement with said tape during advancement of said tape by said tape advancing member and means including said last mentioned means for moving said tape advancing member out of engagement with said tape during a predetermined portion of each cycle of operation of said tape transmitter.

contacting elements 57. Thus, depending upon the arrangements of the transverse rows of perforations in the recording tape 75, Fig. 9, the tongues 48 assume one or the other of two operated positions in accordance with the perforations. One polarity of battery is applied to the bus bar 56 and a different polarity to the contacting elements 57 and hence the tongues 48 have different polarities applied thereto in accordance with the perforations in the tape. The tongues are individually connected to some sort of a distributing mechanism which distributes to a sending line impulses representative of the polarities applied to the tongues.

Also extending through the top plate 11 and guide plate 67 are two toothed members 76 and 77, Figs. 2 and 3, which are adapted to cooperate with the feed holes such as 78, Fig. 9, in the tape to advance the same a predetermined amount on each operation of the operating magnet 14. In the preferred embodiment of the invention the toothed member 76, or the tape advancing member as it is sometimes called, has three upwardly extending teeth thereon and is formed by a vertically bent section of a flat bar 79. Attached to the under side of the flat bar 79, as shown in Fig. 2, is the right hand end of a flexible strip of material 81, the left hand end of which is attached to the tape advancing bar 32 by a screw 82. Thus, by means of the above described arrangement the toothed member 76 is arranged to oscillate back and forth with the tape advancing bar 22 and is also capable of vertical movement by means of the flexible strip 81.

The second or retaining toothed member 77 which has two teeth thereon extending through the top plate 11 is formed by the vertically bent end of a bar 83. The bar 83 has adjacent the center thereof an arched section 84, arranged to clear the guide block 23, and attached to the bar 83 at the left of the arched section is a flexible strip 86. The opposite end of the flexible strip 86 is secured to the under side of the top plate by a screw 87. Thus, by means of the flexible strip 86 the retaining toothed member 77 is allowed to move up and down and into and out of operative engagement with the tape in a manner hereinafter described.

Attached to the under side of the top plate 11 by screws 88, Figs. 1 and 2, is a bracket 89 which carries a shoulder screw 91. Pivotaly mounted on the shoulder screw 91 is a ratchet disc 92 which has formed on one face thereof a series of teeth 93. Riveted to the under side of the bar 83 from which the retaining toothed member 77 is formed is a pawl 94 in operative relation with the teeth 93 of the disc 92. A second pawl 95 in operative relation with the teeth of the disc 92 is riveted to the right hand end of the bar 79 from which the operating toothed member 76 is formed. The pawls 94 and 95 cooperate with the teeth 93 of the disc 92 to move the toothed members 76 and 77 into and out of engagement with the feed holes in the tape.

The operation of the toothed members 76 and 77 and the manner in which they cooperate with the feed holes in the tape 75 and the teeth 93 of the disc 92 can best be described with reference to Figs. 5 to 8. In these figures a section of the disc 92 is shown developed with reference to the cooperating members. Fig. 5 shows the positions of the toothed members 76 and 77 in the position they assume when the operating

magnet 14, Fig. 2, is deenergized. On energization of the operating magnet 14, the slide bar 22 is slid from its right hand into its left hand position, as described above. During the first part of the movement of the slide bar 22, the sloping surface 38 on the member 37 at the right hand end thereof causes the withdrawal of the sensing pins 53 from out of the perforated holes such as 74, Fig. 9, in the recording tape 75 and engagement of the T-shaped elements at the free ends of the tongues 48 with associated contacting elements 57. Following the withdrawal of the sensing pins 53 out of engagement with the perforated tape 75, the right hand adjusting screw 26 moving with the slide bar 22 rocks the arm 27 in a counterclockwise direction as shown in Fig. 1. The lost motion connection between the slide bar 22 and the arm 27 is provided in order that the sensing pins 53 will be disengaged from the recording tape before the advancing operation thereof.

The operating toothed member 76, Figs. 5 to 8, is adapted to move with the arm 27 through connections hereinbefore described and accordingly the toothed member 76 oscillates back and forth with each energization and deenergization of the operating magnet 14. Fig. 5 shows the operating toothed member 76 and the associated operating bar 79 in their extreme right hand positions, and as the arm 27, Fig. 1, moves toward the left, the toothed member 76 moving therewith advances the recording tape 75. During movement of the toothed member 76 and operating bar 79 toward the left, the pawl 96 moving therewith engages a tooth 93 on the disc 92 to rotate or step the same. As the disc 92 thus rotates during leftward movement of the toothed member 76, a beveled surface 80 of a tooth thereon cooperates with the pawl 94 associated with the toothed member 77 to move or cam the toothed member 77 in a downward direction and withdraw the associated teeth out of engagement with the feed holes in the tape. Such a position of the toothed member 77 is shown in Fig. 6, wherein the toothed member 76 is shown after having moved approximately one-half the distance between its right and left hand positions. As the toothed member 76 reaches its left hand position, the pawl 96 moving therewith rotates the disc 92 sufficiently to allow the pawl 94 associated with the toothed member 77 to rise into the next notch between two teeth, as shown in Fig. 7. In this position of the toothed member 77, it reengages feed holes in the tape 75 to retain the tape in position during the return movement of the operating toothed member 76. During the return or movement to the right of the operating toothed member 76, the pawl 94 engages a tooth in the disc 92 to prevent rotation thereof in a reverse direction while the pawl 96 associated with the operating toothed member engaging a beveled surface 80 of a tooth is cammed in a downward direction. This downward movement of the pawl 96 and operating toothed member 76 withdraws the teeth thereon from engagement with the feed holes 78 of the tape 75. Fig. 8 shows the relative positions of the toothed members 76 and 77 with the toothed member 76 at approximately the center or mid-portion of its return movement. When the toothed member 76 reaches its right hand position, the associated pawl 96 moves into a notch between two teeth 93 which also raises the teeth of the toothed member 76 to reengage feed holes

2. In combination, a tape having feed perforations formed therein, a to and fro movable member engageable with said feed perforations to advance said tape in one direction, a tape retaining member engaging the feed perforations of said tape to retain the same in position during predetermined movements of said to and fro movable member, means for operating said to and fro movable member, means operated by said to and fro movable member for disengaging said retaining member from said feed perforations during operation of said to and fro movable member to advance said tape and means controlled by said last mentioned means for disengaging said to and fro movable member from engagement with the feed perforations of said tape during the return movement of said to and fro movable member.

3. In combination, a tape having feed perforations formed therein, a to and fro movable member engageable with said feed perforations to advance said tape in one direction, a tape retaining member engaging the feed perforations of said tape to retain the same in position during predetermined movements of said to and fro movable member, means for operating said to and fro movable member in said to and fro movement to advance said tape, means operated by said to and fro movable member during advancement of said tape to disengage said retaining member from the feed perforations of said tape and means operated by said last-mentioned means for operating said to and fro movable member to disengage the same from the feed perforations of said tape during the return movement thereof and to reengage said to and fro movable member with said feed perforations at the end of the return movement thereof.

4. In combination, a tape having feed perforations formed therein, a to and fro movable member engageable with said feed perforations to advance said tape in one direction, a tape retaining member engaging the feed perforations of said tape to retain the same in position during predetermined movements of said to and fro movable member, means for operating said to and fro movable member in said to and fro movement to advance said tape, means operated by said to and fro movable member during advancement of said tape to disengage said retaining member from the feed perforations of said tape, a first means operated by said last-mentioned means for controlling the reengagement of said retaining member with the feed perforations of said tape at the end of the tape advancing operation of said to and fro movable member and a second means operated by said last-mentioned means for controlling said to and fro movable member to disengage the same from the feed perforations of said tape during the return movement thereof and to reengage said to and fro movable member with said feed perforations at the end of said return movement.

5. In a telegraph machine, a control tape having feed holes therein, an oscillating toothed tape advancing member, a toothed tape retaining member, the teeth of said advancing and retaining members normally engaging the feed holes of

said tape, magnetic means for controlling the oscillations of said tape advancing member and means operative independently of said tape on movement of said tape advancing member to advance said tape to withdraw the teeth of said retaining member from engagement with said tape.

6. In a telegraph machine, a control tape having feed holes therein, an oscillating toothed tape advancing member, the teeth of said advancing member normally engaging the feed holes of said tape, magnetic means for controlling the oscillations of said tape advancing member and means operative independently of said tape on return movement of said tape advancing member for withdrawing the teeth thereof from engagement with the feed holes of said tape.

7. In a telegraph machine, a control tape having feed holes therein, an oscillating toothed tape advancing member, a toothed tape retaining member, the teeth of said advancing and retaining members normally engaging feed holes of said tape and having sloping surfaces on one side thereof, means for oscillating said tape advancing member, means operative on movement of said tape advancing member in advancing said tape to gradually withdraw the teeth of said retaining member from engagement with the feed holes of said tape and on the return movement of said tape advancing member for gradually withdrawing the teeth thereof from engagement with the feed holes of said tape, the sloping surfaces on the teeth of said toothed members enabling the gradual withdrawing of the same from engagement with the feed holes of said tape independently of said tape.

8. In combination, a control tape having feed perforations predeterminedly spaced along the direction of its length, a first member engageable with said perforations to advance said tape during a first predetermined movement thereof, a second member engageable with said perforations to retain said tape in position during a second predetermined movement of said first member, a disc rotated a predetermined amount by said first member during the first predetermined movement thereof, means controlled by said disc on rotative movement thereof for withdrawing said second member from engagement with the perforations of said tape and means controlled by said disc in its stopped position for withdrawing said first member from engagement with the perforations of said tape during the said second predetermined movement thereof.

9. In combination, a control tape having feed perforations predeterminedly spaced along the direction of its length, a member engageable with said feed perforations and movable in a first path of movement from a normal position to an operated position to advance said tape, means operated by said member in advancing said tape for controlling the return thereof to said normal position through a second path of movement and means including said last-mentioned means whereby said member is withdrawn from engagement with said feed perforations in said tape during the second path of movement thereof.

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