

No. 719,300.

PATENTED JAN. 27, 1903.

D. BRIGGS & S. H. FARNHAM.

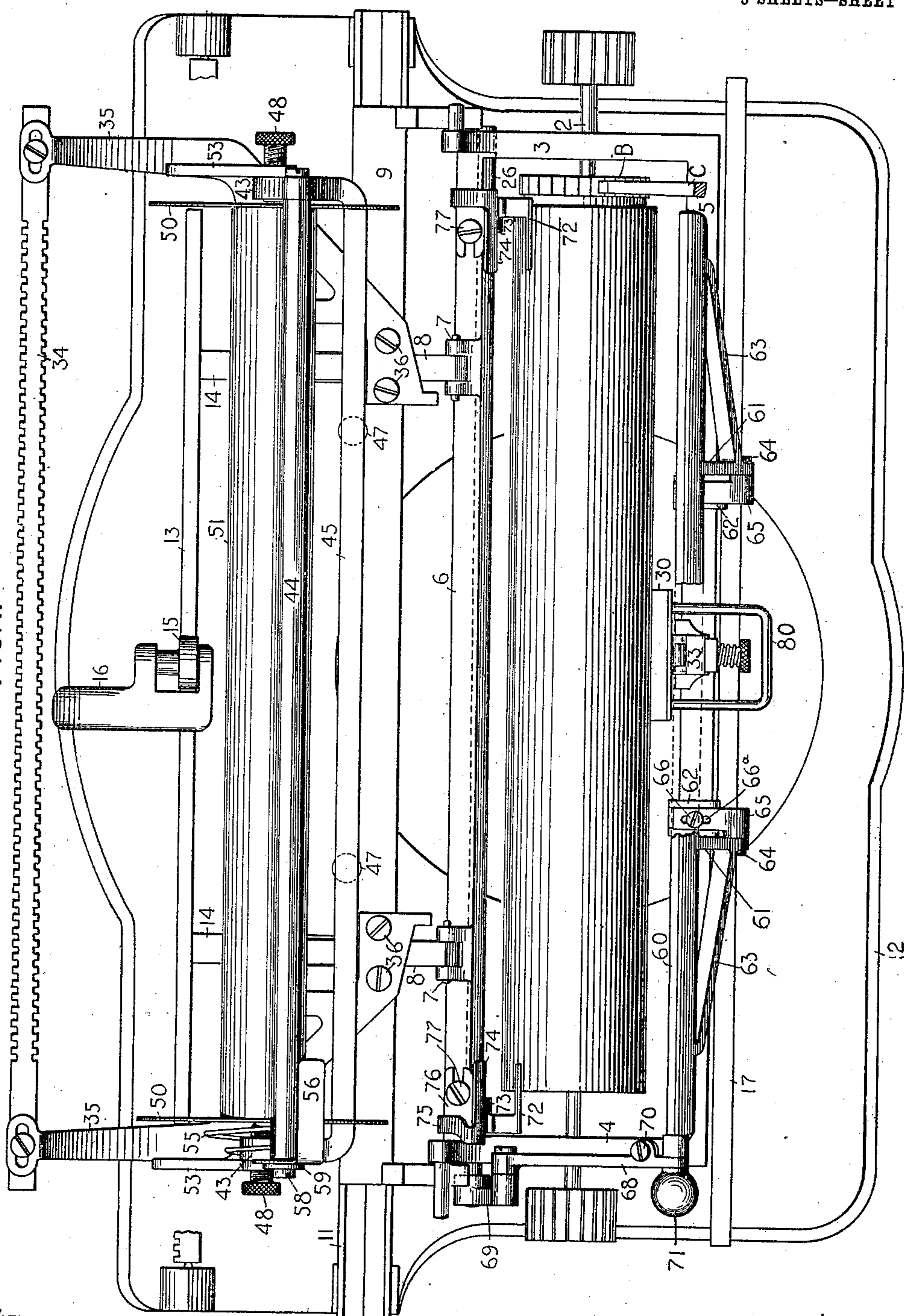
TYPE WRITING MACHINE.

APPLICATION FILED APR. 5, 1901.

NO MODEL.

5 SHEETS—SHEET 1.

FIG. 1.



WITNESSES:

K. V. Donovan.
E. M. Wells.

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by *Jacob Felbel*
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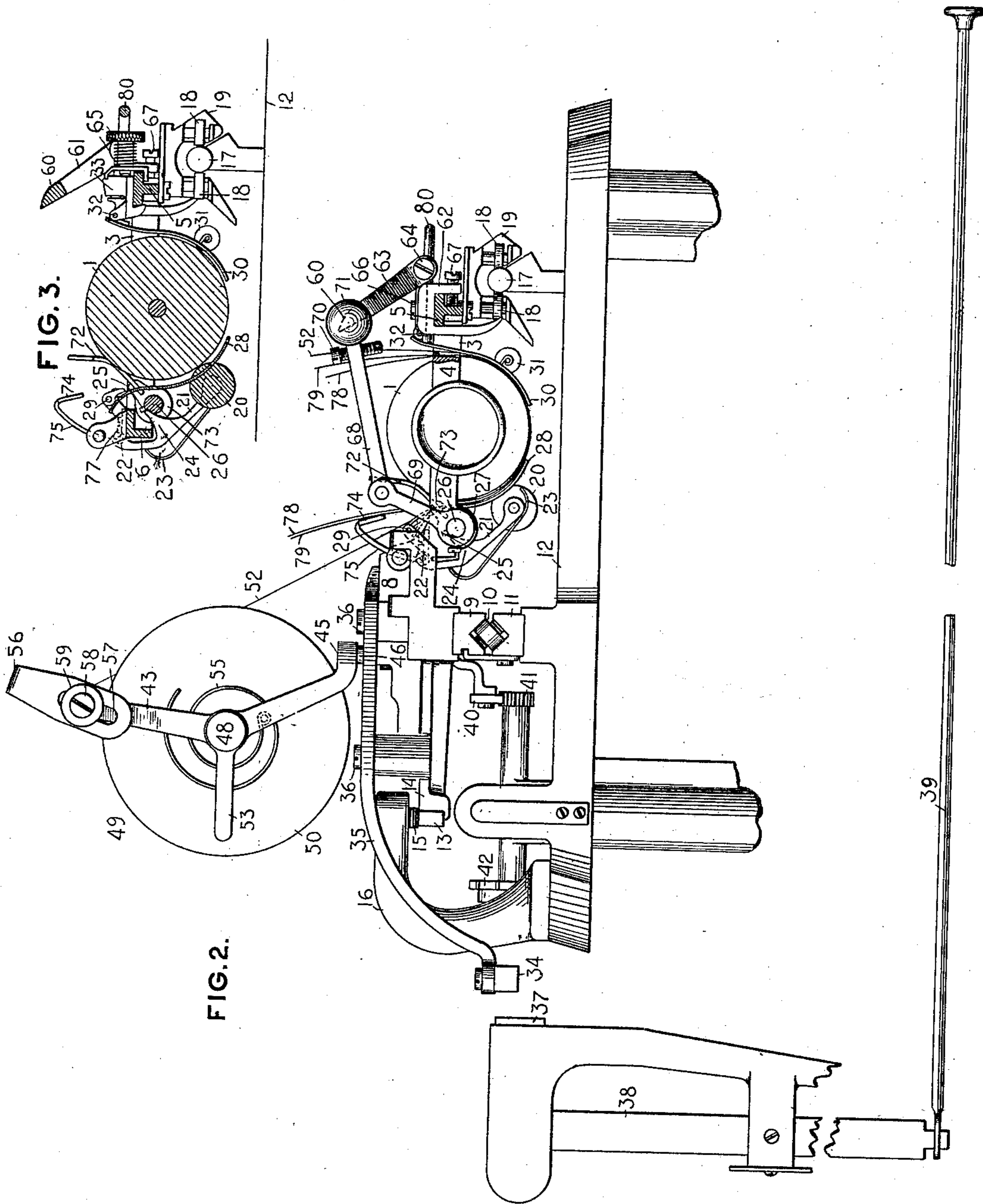


FIG. 2.

FIG. 3.

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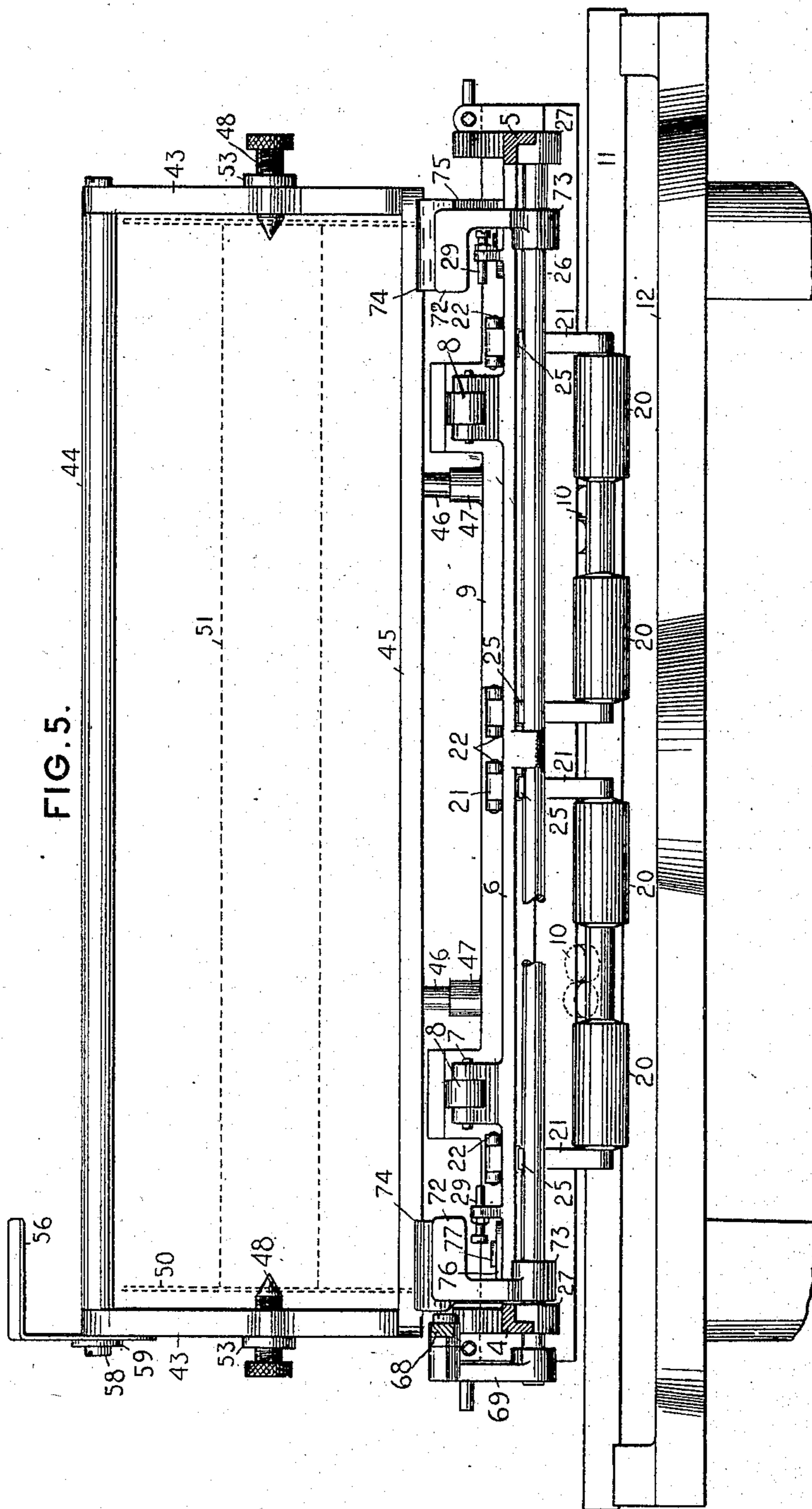
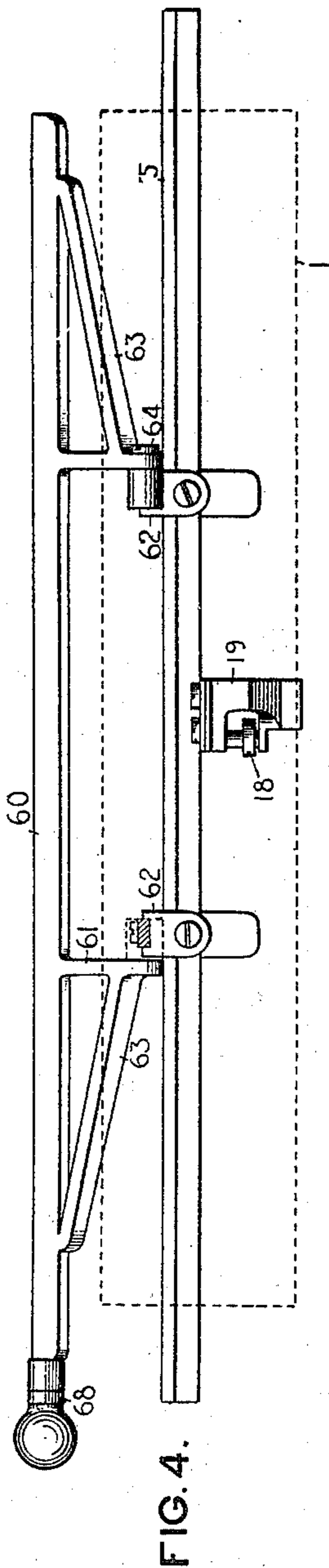
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5 SHEETS—SHEET 3.



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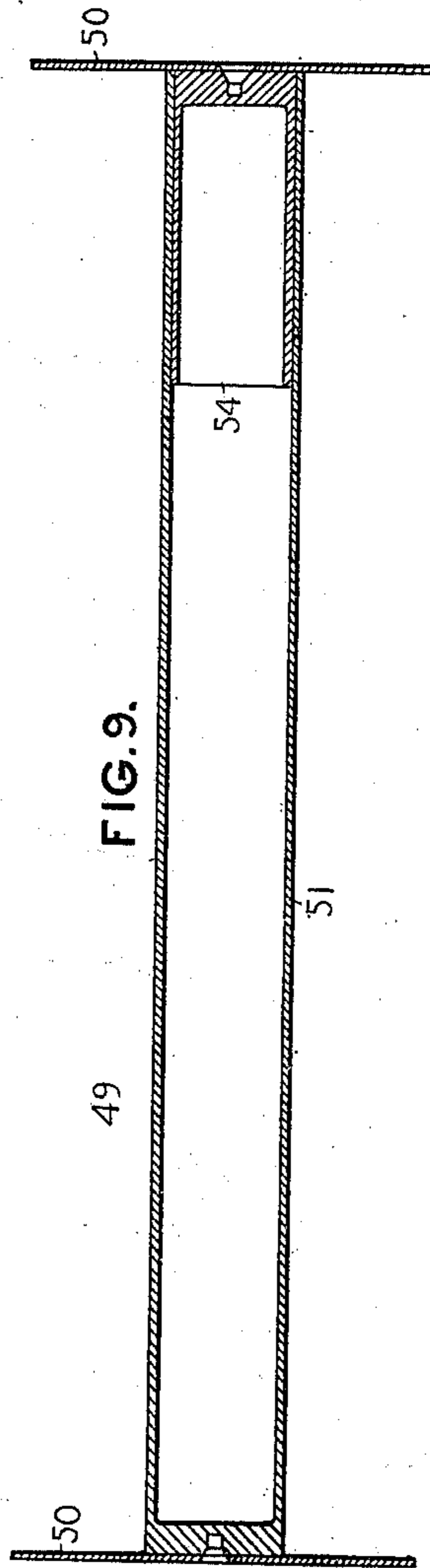
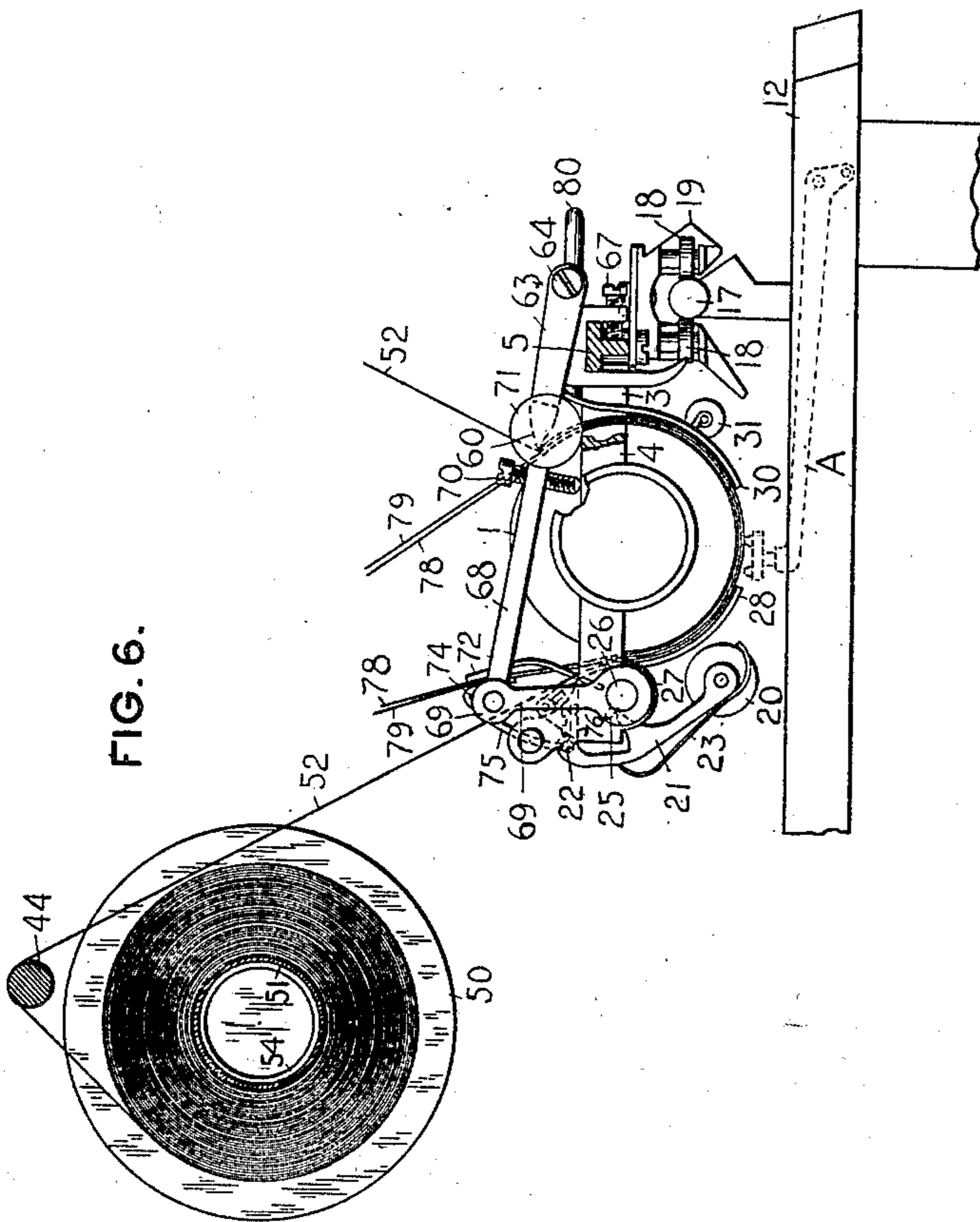
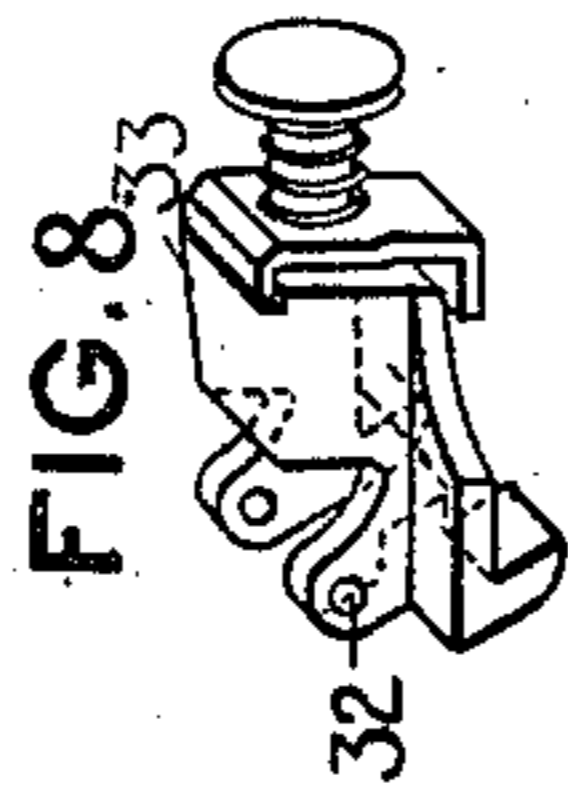
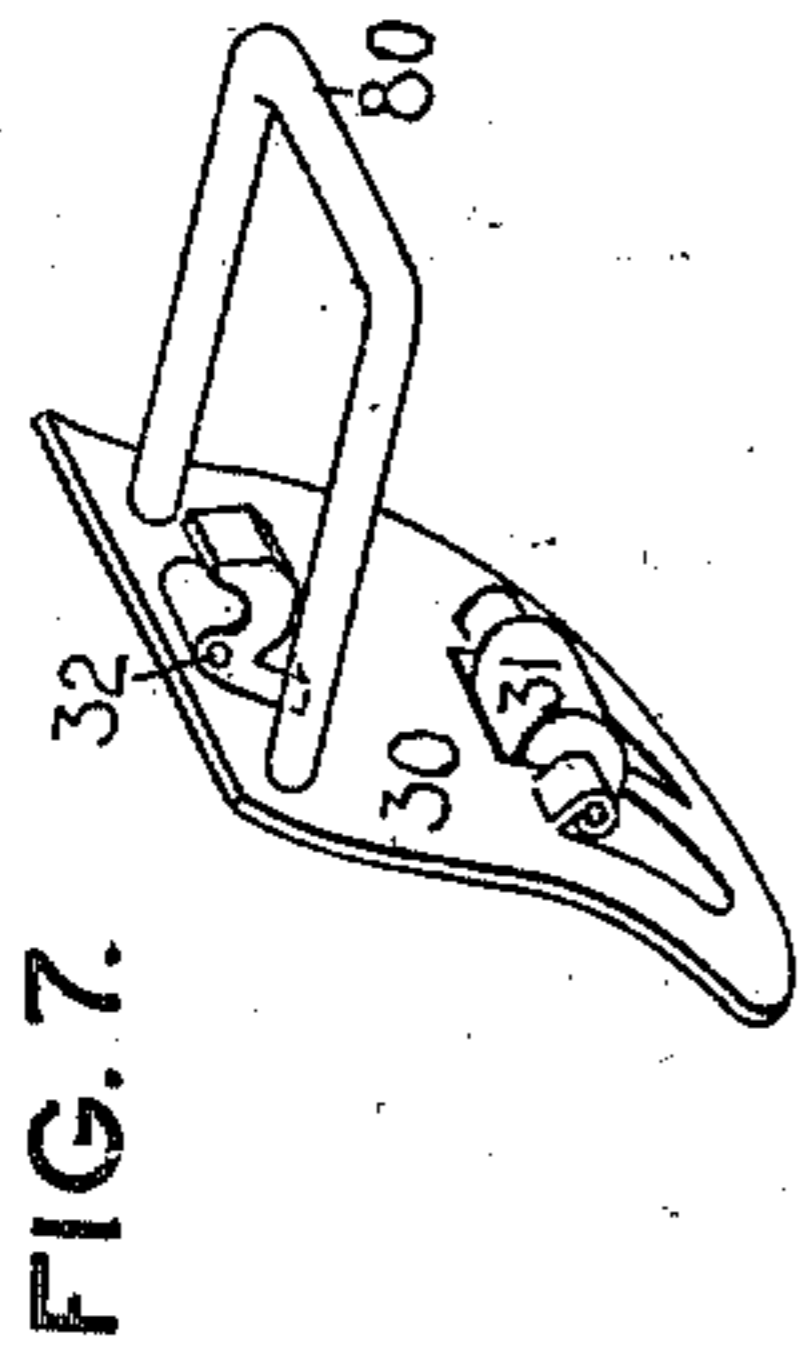
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6 SHEETS—SHEET 4.



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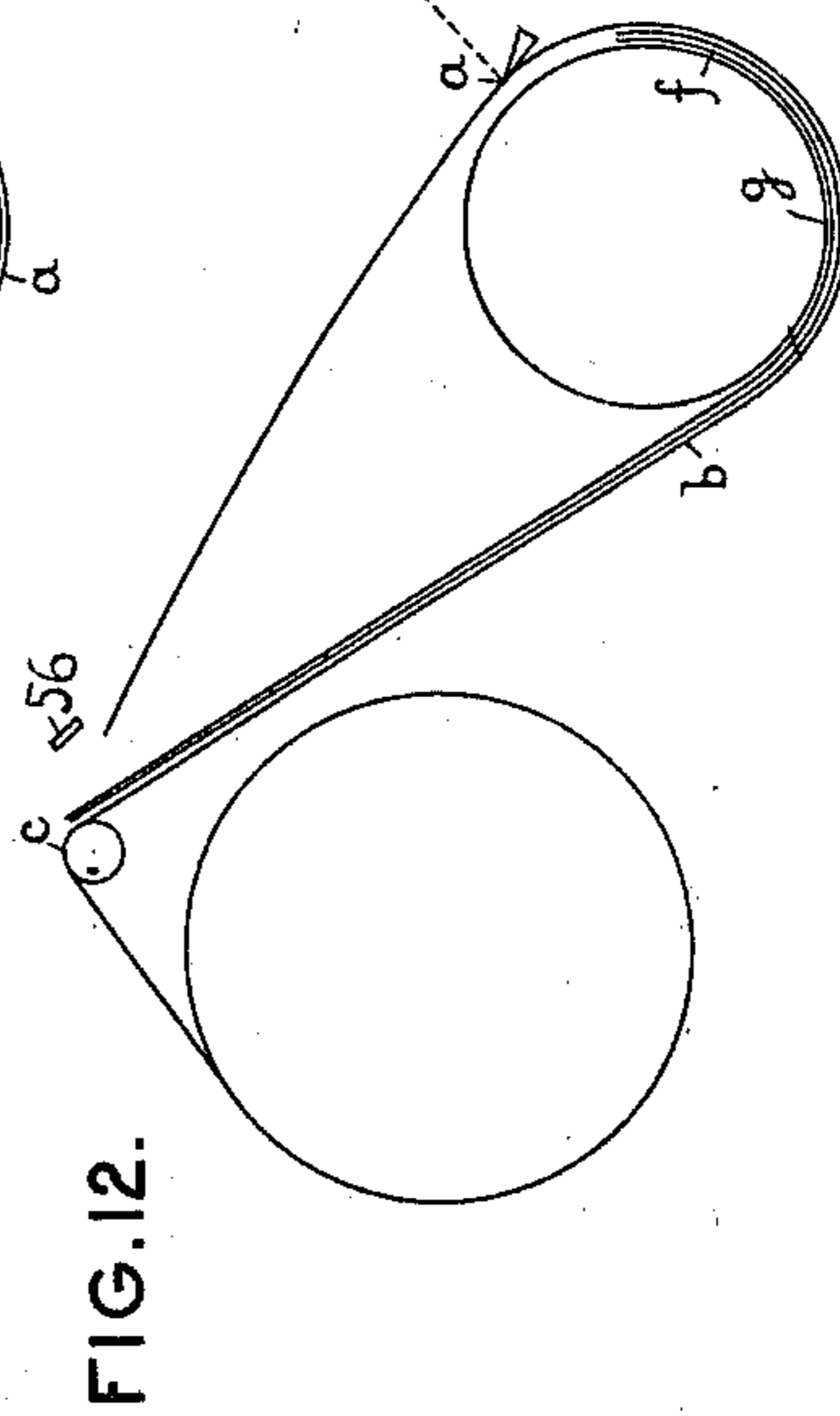
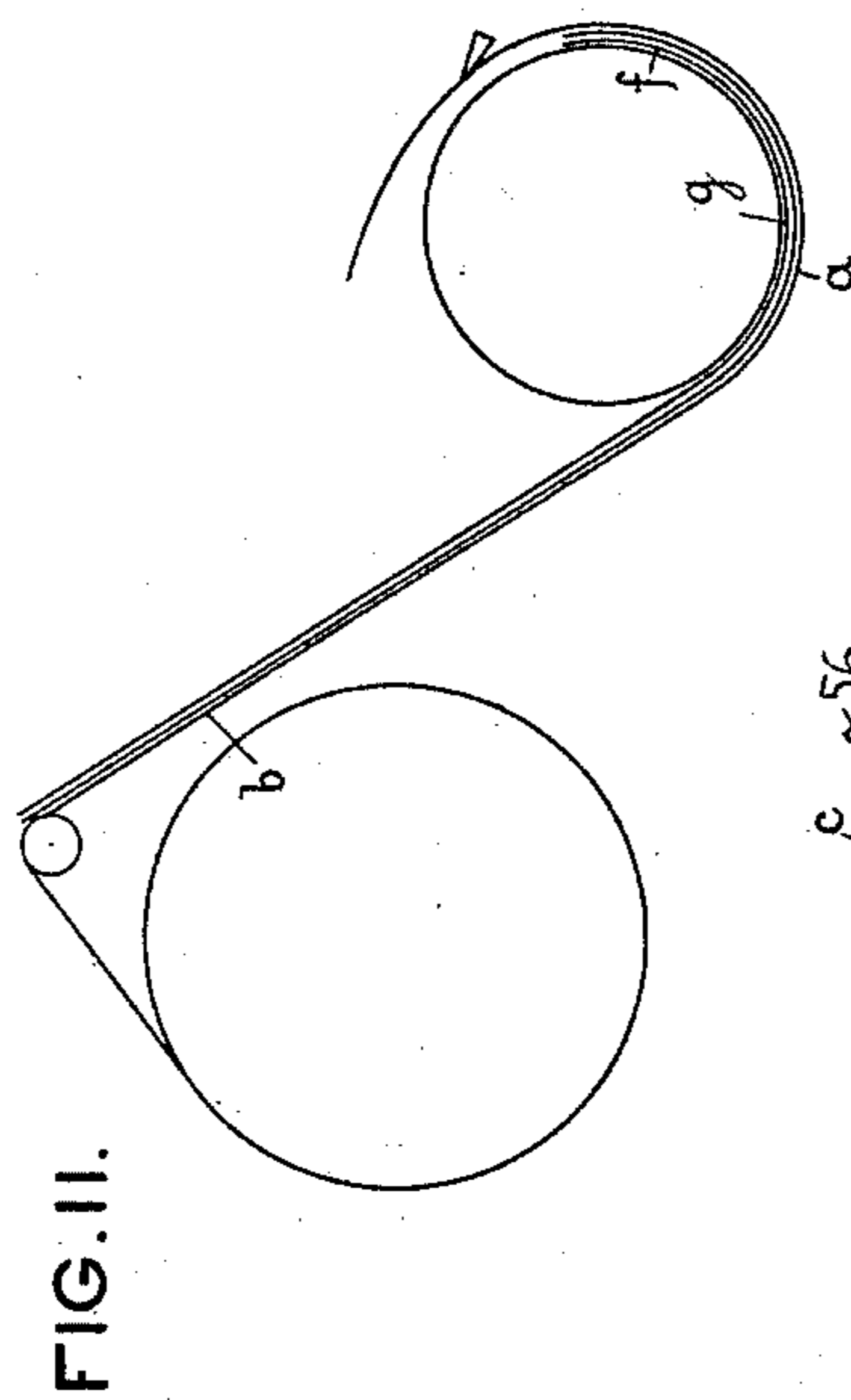
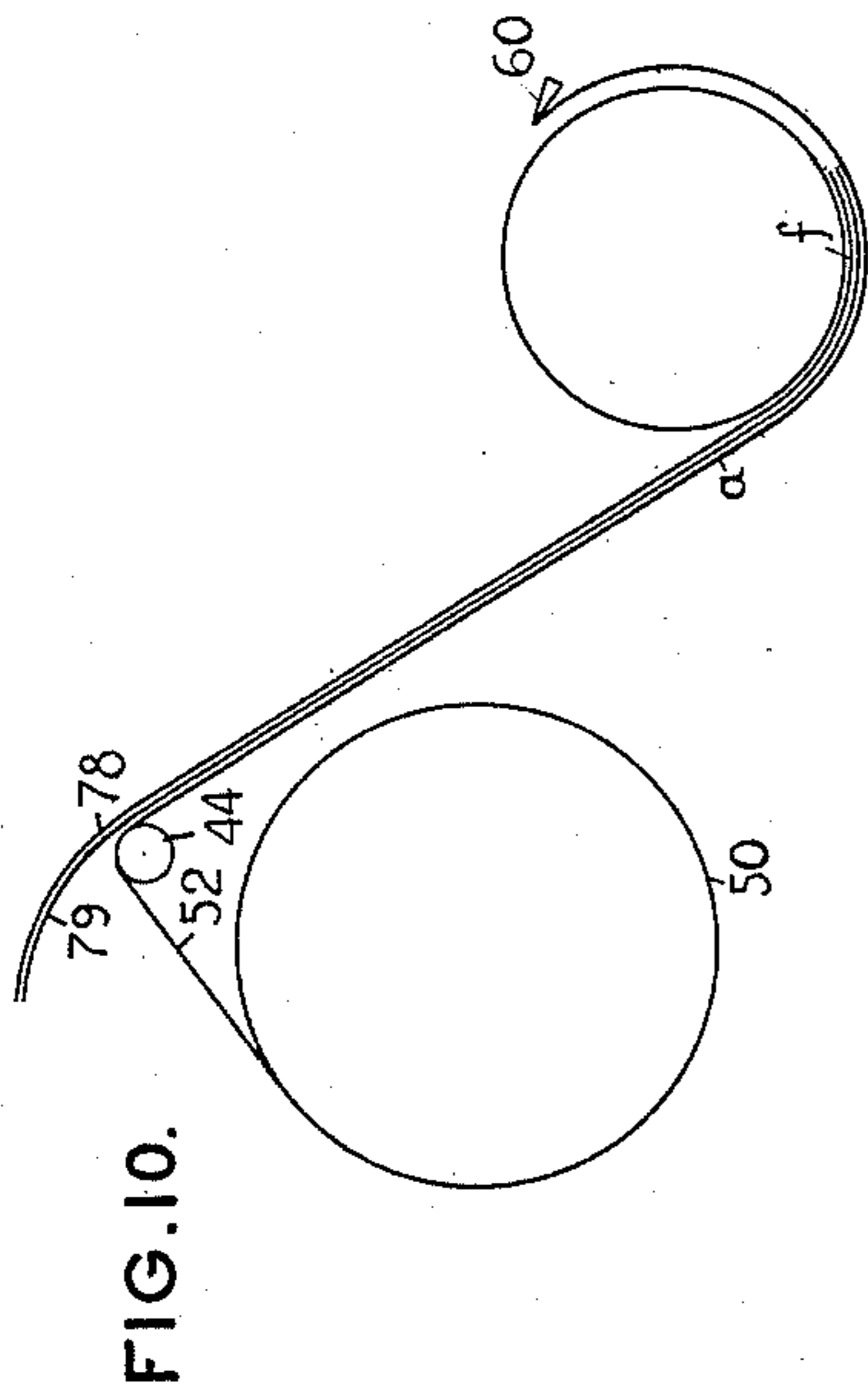
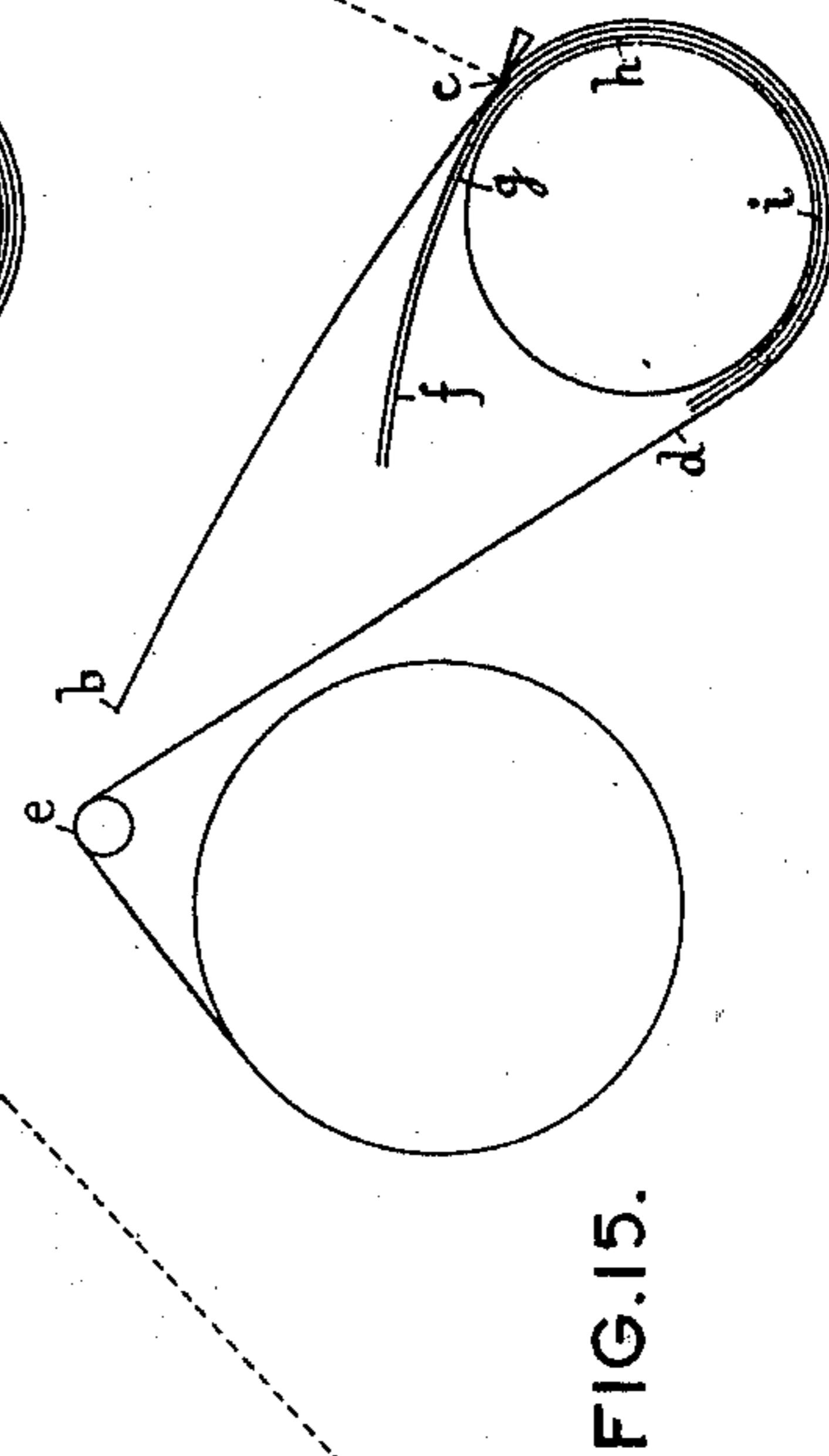
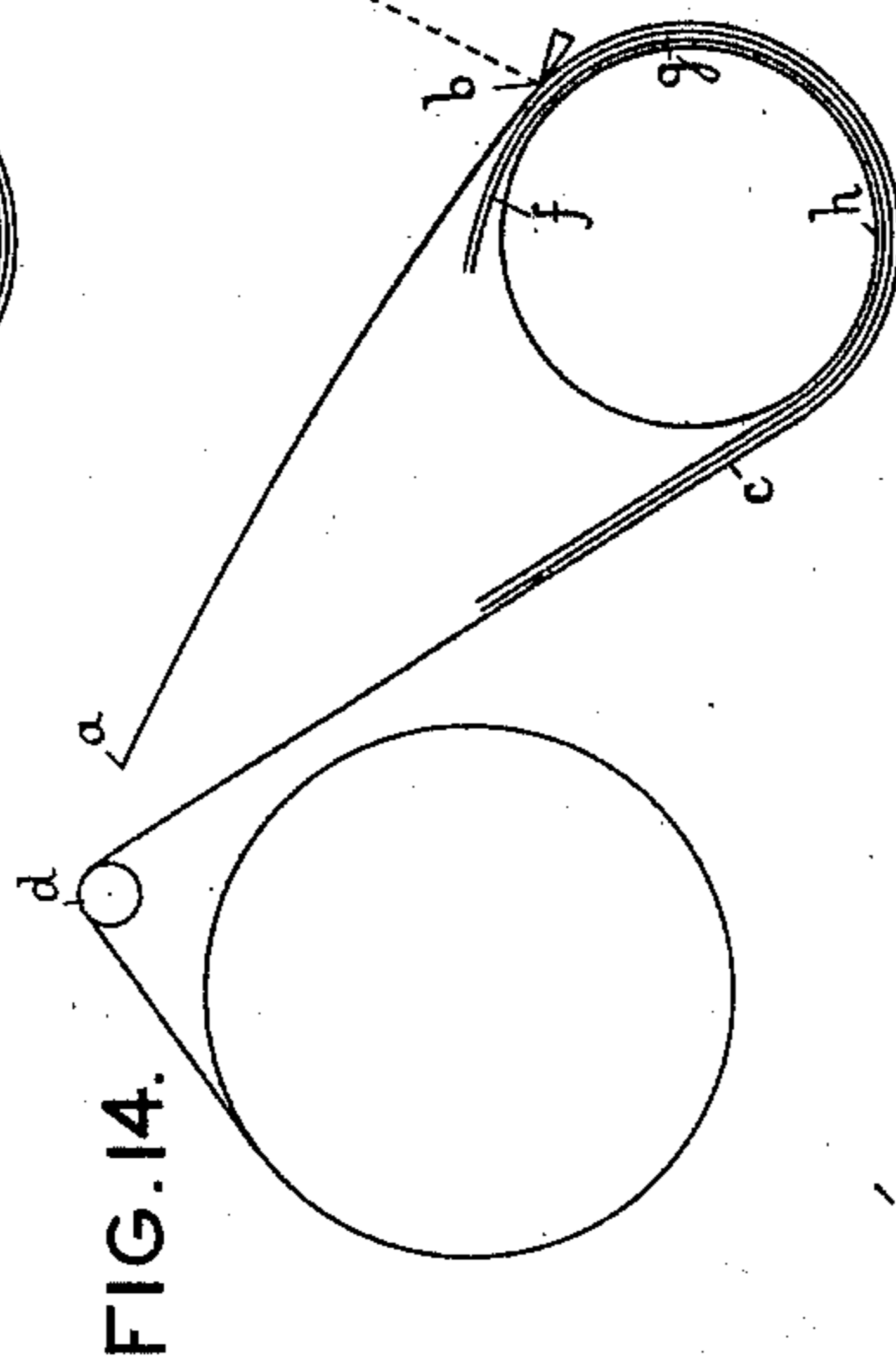
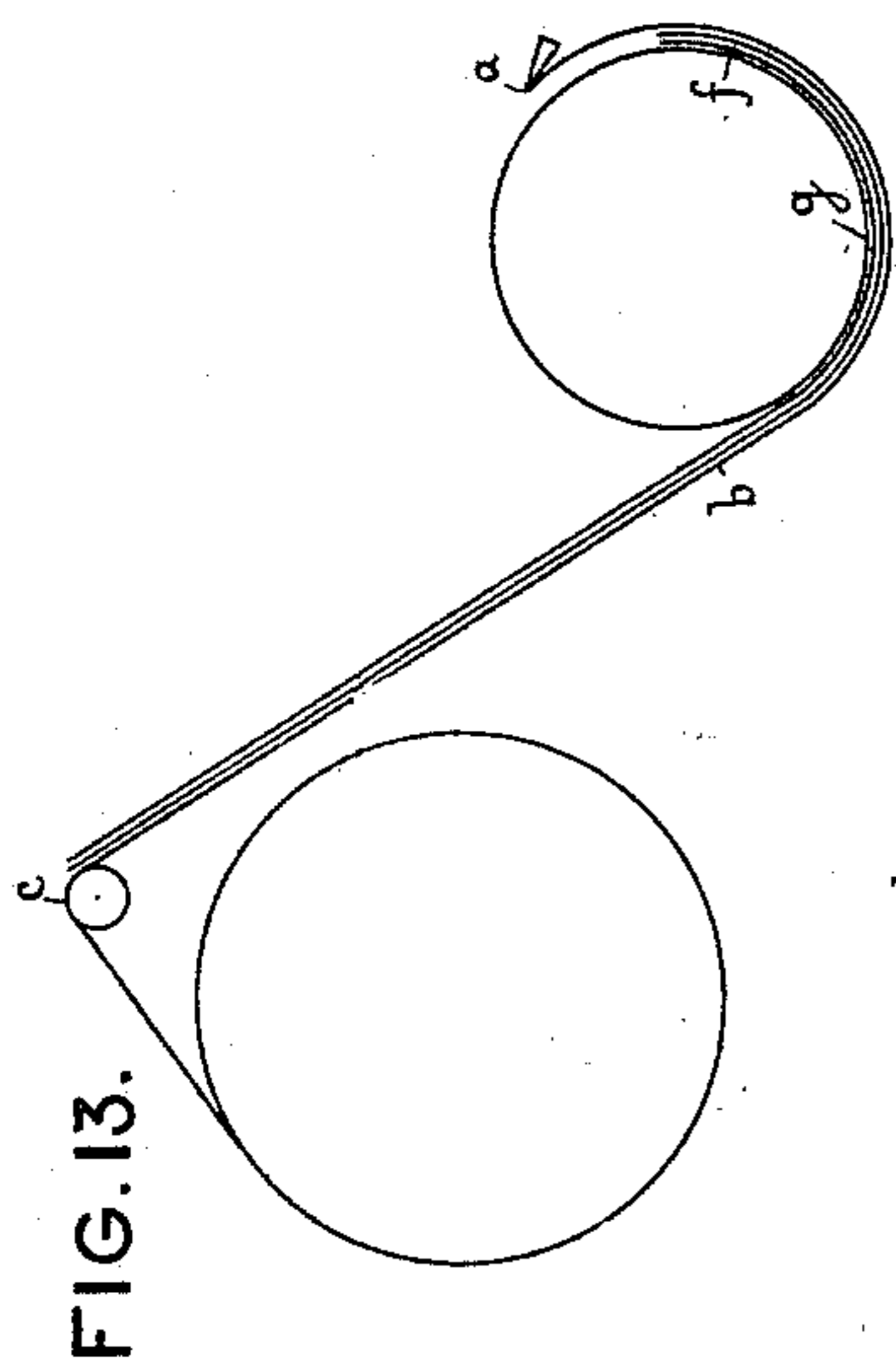
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5 SHEETS—SHEET 5.



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UNITED STATES PATENT OFFICE.

DANIEL BRIGGS AND STEPHEN H. FARNHAM, OF BROOKLYN, NEW YORK,
ASSIGNORS TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK,
A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 719,300, dated January 27, 1903.

Application filed April 5, 1901. Serial No. 54,462. (No model.)

To all whom it may concern:

Be it known that we, DANIEL BRIGGS and STEPHEN H. FARNHAM, citizens of the United States, and residents of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

10 This invention relates to the paper-feeding devices of type-writing machines, and particularly to means for making carbon records of type-written bills or other memoranda, several of which are to be carbonized or
15 manifolded upon a single record-sheet. One bill-head may be inserted in the type-writing machine, together with a record-sheet and a carbon or transfer sheet, without difficulty; but it is difficult to remove the bill
20 without disturbing the record-sheet and insert a second bill-head in such a position that the carbonized copy thereof shall appear in its proper place below the first bill upon the record-sheet, and it is also difficult to remove the
25 second bill and insert the third and succeeding bill-heads so that the duplicates shall appear in their proper places upon the record-sheet. Moreover, in order to avoid the liability of overlapping it becomes necessary
30 to unduly separate the carbon entries, thus tending to waste the space upon the record-sheet.

The main objects of our invention are to facilitate the operation of making continuous
35 carbon records of separate bills and to condense the entries upon the record-sheets without incurring the liability of overlapping.

40 In practicing our invention we preferably employ a roll or web of paper having bill-heads printed thereon in succession, each bill-head being separated from the next by a printed or perforated line, and after making out each bill we tear it off from the web at
45 said line; but it will be understood that separate bill-heads may be employed, if desired.

Our invention consists in certain combinations of devices, features of construction, and arrangements of parts, all as will be hereinaf-

ter more fully set forth, and particularly 50 pointed out in the concluding claims.

In the accompanying drawings, Figure 1 is a plan of the upper portion of a Remington No. 8 type-writing machine, showing our improvements applied thereto. Fig. 2 is 55 an elevation taken at the left-hand end of Fig. 1. At Figs. 1 and 2 are indicated portions of a tabulating mechanism of the well-known Gorin type. Fig. 3 shows a cross-section of the platen and platen-frame. Fig. 4 60 is a front elevation of a bill-severing blade, showing the manner of mounting the same upon the front bar of the platen-frame. Fig. 5 is a sectional front view showing various devices which are mounted in rear of the 65 platen. Fig. 6 is an end view of the platen-carriage and of a roll of paper, the spool whereon the paper is wound being shown in cross-section. At this figure is illustrated the position of the mechanism when a bill is 70 being torn off from the roll. Fig. 7 shows an improved front paper-guide, and Fig. 8 shows the usual adjustable bracket upon which said guide is mounted. Fig. 9 is a longitudinal section of the spool whereon the paper is 75 wound. Figs. 10 to 15, inclusive, show diagrammatically the successive steps in the operation of writing and removing a number of bills and producing carbon copies thereof upon a single record-sheet. 80

In the several views like parts are designated by like numerals of reference. Certain portions of the machine are omitted or broken away, so as more clearly to disclose the invention. 85

1 designates a platen having a shaft 2, which is journaled in the end bars 3 and 4 of a platen-frame, the front and rear bars whereof are designated, respectively, as 5 and 6. This frame is hinged at 7, Fig. 1, to arms or 90 bars 8, projecting forwardly from a truck 9, which runs upon antifriction-rollers 10, the latter rolling along a single grooved track 11, mounted upon a top plate or type-bar ring 12. The truck is prevented from tipping 95 forwardly by means of a horizontal bar 13, which is carried by the rear ends of truck-arms 14 and bears up against an antifriction-

tion-roll 15, mounted in a fixed bracket 16. Along the front portion of the platen-frame extends a guide and shift bar 17, which is engaged by antifriction-rolls 18, mounted in a bracket 19, attached to the front bar 5 of the platen-frame.

Pressure-rollers 20 are mounted upon arms 21, depending from the rear bar of the platen-frame, to which they are hinged at 22, and springs 23 are each secured at one end to the platen-frame in the usual manner and bears at its opposite end on the rear side of an arm 21, near the lower end thereof, so as to force the rollers against the platen, and hence enable them to coact with the platen to feed the paper in line-space direction. Each pressure-roller arm 21 is provided with a projection 24, which terminates just behind a releasing-tappet 25, carried by a rock-shaft 26, said shaft extending parallel with the platen and being journaled in lugs 27, formed upon the under side of the end bars of the platen-frame. (See Figs. 2, 5, and 6.) By rocking said shaft the tappets are caused to press the fingers 27, the arms 21, and the pressure-rollers 20 away from the platen, thereby facilitating both the introduction of the paper between the rollers and the platen and the subsequent adjustment and withdrawal of the paper. Also arranged in rear of the platen is a curved sheet-metal paper guide or deflector 28, having ears at its ends, whereby it is hung upon pivot-screws 29, carried by the platen-frame. Forwardly of the platen is arranged a curved guide-plate 30, carrying a pressure-roller 31 and pivoted at 32 upon a block 33, which is adjustable along the front bar 5 of the platen-frame. The plate 30 is spring-pressed toward the platen and adapted to guide the leading edge of the sheet forwardly and upwardly as the paper feeds around the platen.

At Fig. 1 is illustrated a portion of a Gorin tabulator mechanism comprising a column stop-rack 34 and supporting-arms 35 therefor, said arms being secured upon the truck 9 by screws 36, and at Fig. 2 are also shown denomination-blades 37, levers 38 for operating the latter, and key-rods 39, connected to said levers. At Fig. 2 is further shown a carriage-rack 40, a pinion 41, meshing therewith, and an escapement-wheel 42, connected to the pinion.

The devices above described are all in common use upon said Remington No. 8 type-writing machine.

Upon the truck 9 we mount a rectangular spool-carrying frame, comprising upright end bars 43, upper horizontal bar 44, and lower horizontal bar 45, the latter being provided with short stems or feet 46, Fig. 5, which are adapted to enter perforated bosses 47, usually formed upon the truck 9 for receiving the supporting-stems of the paper-shelf. The bars 43 are provided with opposite pivot-screws 48, upon which is hung a spool, designated generally as 49 and comprising flanges 50 and a core 51, a web of paper 52 being

wound upon the latter. Either screw 48 may be loosened sufficiently to permit removal of the spool. Each screw is provided with a lock-nut 53, having a handle, Fig. 2. The right-hand spool-flange 50 is fixed upon a short tube or bushing 54, Fig. 9, which fits snugly within the bore of the tubular core 51 of the spool and may be drawn out therefrom, so as to permit a fresh roll of paper to be mounted upon the core 51. A friction-spring 55, Figs. 1 and 2, bears against the left-hand spool-flange, so as to prevent excessive overthrow of the spool and roll when a length of paper is rapidly unrolled therefrom. Instead of feeding directly from the spool to the platen the web is led from the roll up over the bar 44 and thence down to the platen, so that the paper may always feed into the machine at the same angle whether the spool is full or nearly empty, thus avoiding any contact of the paper with protruding parts of the type-writer mechanism, such as would sometimes occur if the web were led directly from the spool to the platen, causing crumpling, mutilation, or smearing of the paper. At one or both ends of the spool-carrying frame is fixed a gage-finger 56, provided with a slot 57 and adjustably held in place by a screw 58 and washer 59. By means of the gage the operator may determine approximately how far to advance the web in order to bring the division-line thereon to severing position.

To facilitate tearing off the bills, a blade 60 is arranged longitudinally of the platen, being carried upon the upper ends of pivoted arms 61, which are mounted upon brackets 62, arranged upon the front bar 5 of the platen-frame. The blade stands normally forwardly of and higher than the platen and may be swung down against the latter. The arms 61 support the middle portion of the blade, whose length is about equal to the length of the platen. The extremities of the blade are stiffened by means of struts 63, which extend obliquely to the lower portions of the arms 61. The latter are hinged upon screws 64, which are tapped into opposite lugs 65, the latter being secured upon the brackets 62 by means of screws 66, each lug having a slot 66^a, through which the screw 66 passes. The lugs may be independently adjusted forward or back when assembling the parts upon the machine, so as to bring the blade into parallelism with the platen. Each bracket 62 has a forked portion, which bestrides the front bar 5 of the platen-frame, and a screw 67 for clamping it to said bar.

At its left-hand end the blade is connected by a link 68 to the upper end of a crank 69, fixed upon an end of the release-shaft 26, which projects beyond the platen-frame, the link overlying the left-hand bar 4 of said frame. When the blade is swung down against the platen, the link 68 is simultaneously thrust rearwardly, so as to operate the crank 69, and thereby cause the release of the paper from the control of the pressure-

rollers 20, thus enabling the web 52 to be drawn around the platen until a severing line or mark thereon is brought into register with the top edge of the blade. The movement of the blade and connected parts is limited by an adjustable screw 70, which is tapped into the link 68 and is adapted to contact with the left-hand bar 4 of the platen-frame, as at Fig. 6. The blade is provided with an operating-knob or finger-piece 71. Also operated by the crank-arm 69 are two plates or fingers 72, arranged one at each end of the platen and at the rear side thereof and fixed at their lower ends in collars 73 upon the release-shaft 26, Fig. 3. Each of said plates extends inwardly at the terminal portion thereof, so as to overhang the platen, as at Fig. 1. Two opposing plates 74 are supported, by means of stems 75, feet 76, and screws 77, upon the rear bar 6 of the platen-frame, the feet preferably being slotted to permit adjustment. The plates 74 also extend inwardly, so as to cooperate with the movable plates 72 to clamp both the record-sheet 78 and the carbon-sheet 79 so that the latter may not be pulled around the platen with the web 52 when the latter is being advanced, as aforesaid.

The pivoted front paper-guide 30 has a yoke-like handle 80, which extends horizontally forward over the platen-frame, the guide-carrying block 33 lying within said yoke, as at Fig. 1. By means of said handle the guide may be conveniently moved toward or away from the platen, as required.

In operation the usual paper-table is removed from the machine and the paper-roll frame is placed in position, the stems 46 thereof being inserted in the carriage-lugs 47. The right-hand spool-flange 50 is withdrawn from the core 51 and the roll of printed paper is slipped upon the core, said flange being then restored to place and the spool being mounted upon the center screws 48, which are then duly adjusted to the spool and locked by the handle-nuts 53. The leading end of the web is passed over the deflector-bar 44 and down to the platen, passing behind the stationary clamping-plates 74 and between the plate-standards 75 and is introduced between the platen and the deflector-plate 28 and is caught by the pressure-rollers 20. The platen is then rotated in the usual manner to advance the web until the first blank line thereon, upon which the name of the customer is to appear, reaches the bottom of the platen. At this time the leading edge of the web is opposite the blade 60, and in order that the paper may be straightened the blade is pushed down against the platen, and the edge of the web is adjusted into register therewith. The movement of the blade is communicated through the link 68, crank 69, release-shaft 26, and tappets 25 to the arms 21, thereby causing a movement of the pressure-rollers 20 away from the platen, as illustrated at Fig. 6, so that the web is released and the

said adjustment thereof is facilitated. Having thus brought the web to the proper position for beginning the writing of the bill, the record-sheet 78—that is, the sheet upon which the carbon records are to be made—is inserted between the web and the platen, together with the carbon-sheet 79, the pressure-rollers still being off the platen, as at Fig. 6. The web 52 may be slackened, so as not to obstruct the introduction of the carbon and record sheets between the web and the platen. The record and carbon sheets are advanced until their leading edges overlap the printing-line upon the platen. If desired, they may be advanced until even with the leading edge of the web, thus causing a blank space to be left at the top of the record-sheet, although we prefer to advance said sheets only far enough to slightly overlap the printing-point, thus permitting a maximum number of entries upon each record-sheet.

The carbon-sheet 79 and record-sheet 78 must, unlike the web, pass between the plates 74 and the opposing plates 72, as illustrated at Fig. 2, so as to be clamped thereby when it is desired to advance the web independently. As will be understood, however, from the foregoing description of the mechanism, when the pressure-rollers 20 are cast off said clamping-plates 72 are automatically brought into contact with the plates 74, thus for the time being preventing the introduction of said sheets between the clamping-plates. Consequently said sheets are passed down in front of the plates 72, and as soon as the leading edges of the sheets have been advanced to a working position the severing-blade 60 is lifted by the knob 71, thereby restoring the release-shaft 26 to its normal position, permitting the pressure-rollers 20 to be moved against the paper by the springs 23 and also swinging the clamping-plates 72 forwardly to their normal open positions, so that the side edges of the paper may now be pressed or buckled inwardly and worked rearwardly around the ends of the plates, the sheets then opening out and lying within the open clamp, as illustrated at Fig. 2. If desired, however, the carbon and record sheets may be introduced together with the web, the leading edges of all three sheets coinciding and all passing behind the stationary clamping-plates 74 and being simultaneously adjusted to the edge of the blade, as described, the carbon and record sheets being subsequently worked around the ends of the plates 74 and brought within the clamp. All of the sheets having been adjusted, the writing of the name and address may proceed. Then the platen may be rotated, so as to bring into printing position the first blank line or space upon the body of the bill, whereupon the writing of the items may proceed in the usual manner, a carbon copy thereof being produced upon the record-sheet. At Fig. 6 a type-bar is indicated at A in printing position, and at Fig. 1 are shown the ratchet-wheel B and the driving-pawl C of the usual

line-feeding mechanism. Upon the completion of the bill the knob 71 is operated to bring the edge of the blade against the paper, and by the same stroke the pressure-rollers
 5 are thrown off and the plates 72 are caused to clamp the carbon and record sheets against the plates 74. The leading portion of the web is grasped by the operator and pulled up
 10 until its leading edge about reaches the adjustable gage 56, Fig. 12, thus bringing the bottom of the bill-head about opposite the blade, a corresponding length of the web paying off from the spool 49, and the sheets 78
 15 and 79 remaining stationary, as they are firmly held by the clamping-plates. Then the printed or perforated severing-line or other mark upon the web is more carefully
 20 adjusted into register with the edge of the blade. Then with one hand the operator may press the blade more firmly against the platen
 and with the other hand may tear off the bill.

It will be understood that by the last-described adjustment of the web the blank for the next bill is brought into position for receiving the first line of type impressions.
 25 The record-sheet, having remained stationary during the independent advance of the web around the platen, is likewise in position to receive the carbon impressions of the first
 30 line of writing upon the second bill. In order, however, that the second entry upon the record-sheet may not overlap the first entry thereon, the operator should be careful to
 35 feed all of the sheets one or more line-spaces after writing the last lines upon the first bill and before clamping the record and carbon sheets in the described manner, so that as
 40 soon as the first bill is torn off and the blade lifted the writing may proceed without further manipulation, a suitable space appearing between the two bills upon the record-sheet.
 In this manner the writing of the bills may proceed one after another until the record-sheet is full. It will be seen that while the
 45 record-sheet feeds in unison with the web during the line-spacing operations it is not drawn forwardly with the web when preparation is being made to tear off the bill from the latter, inasmuch as the clamp detains
 50 both the record-sheet and the carbon-sheet, and thus there is effected a great saving both in carbon and record paper, since while the writing of a dozen bills might consume five
 55 feet of paper from the web, still said bills would not occupy more than perhaps sixteen inches in length of record-paper. It will also be seen that at no time is the platen or the
 60 paper moved backwardly, but that there is a constant forward feed and that no special adjustment of the carbon or record sheets is necessary after they have been once inserted in the machine. It will also be understood
 65 that the space upon the record-sheet occupied by each bill or entry is dependent upon the number of items thereon, so that a bill containing but few items consumes only a small
 portion of the record-sheet, and if there should

be a succession of bills each having only one or two items thereon the record-sheet would accommodate a great number of them. Thus it
 70 will be seen that the record is condensed, not only economizing stationery, but also rendering the records much less bulky and more convenient for reference. When the last entry is made at the bottom of the record-sheet,
 75 the platen is rotated forwardly without releasing the pressure-rollers until the division-line upon the web is brought up to the severing position. By this operation the record
 80 and carbon sheets are advanced so far that they may be easily withdrawn from the machine. Then the bill is torn off in the described manner, and before the writing of the next bill begins a fresh record-sheet is
 85 inserted, together with the same or a fresh carbon-sheet, whereupon the writing of the bills is continued.

Referring now to Figs. 10 to 15, inclusive, it will be seen at Fig. 10 that both the web and the superposed sheets are in position to
 90 begin the writing of the bill. The leading ends of the record and carbon sheets 78 and 79 slightly overlap the printing-point, while the leading end of the web is carried up into register with the blade 60, the portion of the
 95 bill-head which extends around the front of the platen being occupied by the printed matter. The first line of type impressions falls upon the unprinted record-sheet 78 at *f*. At
 100 *a* is indicated the dividing-line between the first and second bill-heads upon the web. Fig. 11 shows the positions of the several sheets at the completion of the writing of the first bill. It will be understood that the
 105 written lines occupy the space between *f* and *g* upon the record-sheet. While the record and carbon sheets are detained the leading end of the web is independently advanced until the first severing-line *a* thereon registers with the blade, as at Fig. 12, whereupon
 110 the bill is doubled over the blade, as indicated by the dotted line, and severed, thus leaving the top edge of the second bill in register with the blade, as at Fig. 13. Thus it
 115 will be seen that the first and second bills are advanced together and that the movement that brings the first bill into position for detachment also brings the second bill into position for beginning the writing thereon.
 120 The second bill is now written, the carbon duplicate thereof occupying the space between *g* and *h* upon the record-sheet. Then the web is advanced independently until the second severing-line *b* thereon registers with the blade, whereupon the second
 125 bill is torn off, as at Fig. 14, thus leaving the third bill-head in position for the writing to be begun thereon. The carbon impressions of the third bill fall between *h* and *i* upon the record-sheet. The web is then independently
 130 advanced until the third severing-line *c* thereon is even with the blade, Fig. 15, whereupon the third bill is torn off, leaving the fourth one in position for writing. The severing-line of

the fourth bill is indicated at *d* and that of the fifth bill at *e*, Fig. 15. It will be understood that at the completion of the fourth bill the remaining space upon the record-sheet is filled, whereupon without releasing the pressure-roller the platen is rotated, so as to advance the web until the severing-line *d* thereon is opposite the blade and simultaneously feed the record and carbon sheets out of the machine, whereupon a fresh record and carbon sheet may be inserted in the manner above set forth.

In case any bill should contain an excessive number of items, so that it could not be accommodated upon one of the blanks printed upon the web, the latter may be temporarily pulled out backwardly from the platen without disturbing the carbon and record sheets, the latter being held by the closed clamping-plates, and a single long sheet having a heading printed thereon may be inserted in lieu of the web and duly adjusted. As soon as it is written and withdrawn, the carbon and record sheets of course being detained in the machine, the leading edge of the web may be again introduced and the writing of the short bills proceed as before.

By using a printed web the necessity of introducing and adjusting a separate printed sheet for each bill is avoided, and much time is thereby saved. If desired, however, the paper-roll mechanism may be omitted, and our other described improvements may be utilized to advantage in writing upon ordinary detached bill-heads. It will be perceived that the gist of one portion of our invention resides in mechanically holding the carbon and record sheets in position for a new record while the written bill is being withdrawn from the machine.

It will be seen that we have combined devices for feeding superposed sheets of paper with means for mechanically detaining one or more of the sheets during an independent advance movement of the remaining sheet or sheets, said detaining means being preferably in the form of a clamp which may engage one or more of the sheets at will; that the clamp is normally open and the sheets 78 and 79 feed through said clamp and lie between the web and the platen; that the clamp is carried by the platen-frame and arranged at the receiving side of the platen or the side at which the paper feeds into the machine; that the opposing plates or jaws of the clamp overhang or are within the field of the platen; that the clamp is held open by a spring or springs 23, which actuate the arms 21, and thereby press the tappets 25 forwardly, together with the rock-shaft 26 and its clamping-plates 72; that the clamps are adapted to hold the side edges of the paper, one of said clamps being arranged at each side of the paper or at each end of the platen; that the finger-piece 71 is connected to the clamp-shaft 26, which extends longitudinally of the platen; that the sheets 78 and 79 pass between the opposing members of the clamp while the sheet 52 passes outside of

said opposing members, so that at the operation of the clamp the sheets 78 and 79, which are nearest the platen, are mechanically held stationary; that the paper-clamp is stationary, in the sense that it does not move around the platen, together with the paper; that the clamp is operatively connected to means for releasing the paper from the paper-feeding devices; that the clamp operates automatically to grip the side edges of the paper when the sheets are released from the pressure-roller; that the pivoted arm or arms 61, which carry the severing-blade 60, may be regarded as a single lever and that the relation of said lever to the link 68 is such as to form a toggle, whereby the crank 69 is swung and locked, as at Fig. 6, thus leaving both hands of the operator free to adjust and tear off the web 52; that a single stroke of said lever or toggle is sufficient to operate and lock the crank and connected devices; that the severing-blade is hinged upon the platen-frame and extends along said platen for substantially the entire length thereof; that the blade normally stands away from the platen and is movable into contact therewith, the extent of said movement being adjustably limited by the screw 70; that by means of the lug 65 the blade is adjustable in a direction transverse to the platen, and that when the blade is moved to operative position the pressure-roller is simultaneously cast off and the clamp closed.

Many changes may be made within the scope of the invention, portions of which may be used without others. Although we have described particularly the operation of recording bills, still it is obvious that the invention may also be used for making condensed records of all kinds.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a type-writing machine, as a means for producing condensed records, the combination with a platen, of means for holding the record-sheet in a fixed position during the advancement thereover of a superposed sheet.

2. In a type-writing machine, as a means for producing condensed records, the combination with a platen, of means for holding both a carbon and a record sheet in a fixed position during the advancement or removal of a superposed sheet.

3. In a type-writing machine, the combination of a platen, means for holding a number of sheets thereon, and independent means for holding one or more of the sheets while the outside sheet is being adjusted or removed.

4. In a type-writing machine, the combination with a platen, of means for holding a number of sheets thereon, and a clamp for holding one or more of the sheets in a fixed position while one or more of the other sheets are being adjusted or removed.

5. In a type-writing machine, the combination of a platen, a device for supporting a roll

or web of paper, means for holding said web, together with a carbon-sheet and a record-sheet, upon said platen, and means for holding the carbon-sheet stationary during an advance movement of the web thereover.

6. In a type-writing machine, the combination of a platen, a device for supporting a roll or web of paper, means for holding said web, together with a carbon-sheet and a record-sheet, upon said platen, means for holding the carbon-sheet stationary during an advance movement of the web thereover, and a severing-blade.

7. In a type-writing machine, the combination of a platen, a device for supporting a roll or web of paper, means for holding said web, together with a carbon-sheet and a record-sheet, upon said platen, means for holding the carbon-sheet stationary during an advance movement of the web thereover, a severing-blade, and means for holding said blade against the paper.

8. In a type-writing machine, the combination with devices for feeding superposed sheets of paper, of means for mechanically detaining one or more of the superposed sheets in the printing position during a movement of the remaining sheet or sheets.

9. In a type-writing machine, the combination with means for feeding the sheet, of a clamping device constructed to engage the sheet at will so as to prevent movement thereof during the movement of a superposed sheet.

10. In a type-writing machine, the combination with paper-feeding devices, of a normally open clamp, and means for closing said clamp upon certain of a plurality of superposed sheets while another of said sheets is free to move past said clamp.

11. In a type-writing machine, the combination with devices for feeding the paper, including a platen and a pressure-roller, of a normally open clamp through which certain of a plurality of sheets are fed, while another of said sheets is adapted to pass free of said clamp, and means for closing said clamp.

12. In a type-writing machine, the combination of a platen, a platen-frame, and a paper-clamp carried by the platen-frame and arranged at the receiving side of the platen.

13. In a type-writing machine, the combination of a platen, a platen-frame, and a paper-clamp mounted upon the platen-frame and arranged at the receiving side of the platen, said clamp having opposing plates or jaws which overhang the platen and between which the paper passes as it feeds around the platen.

14. In a type-writing machine, the combination of a platen, a platen-frame, a clamping-plate pivotally supported upon the platen-frame and arranged at the receiving side of the platen, an opposing plate fixed upon the platen-frame, and means for moving the first plate to the second plate so as to clamp the paper.

15. In a type-writing machine, the combination of devices for feeding the paper, a

clamp between the opposing faces of which the paper is fed, and a spring for holding the clamp open.

16. In a type-writing machine, the combination with paper-feeding devices, of a pair of clamps for clamping the side edges of the paper, said clamps being normally open so that the paper may be fed along by said feeding devices.

17. In a type-writing machine, the combination with paper-feeding devices, of clamps arranged one at each side of the paper, said clamps being normally open so that the paper passes therethrough as it feeds along, and means for closing said clamps.

18. In a type-writing machine, the combination of a platen, a platen-frame, and normally open clamps arranged one at each end of the platen, said clamps being supported upon the platen-frame and so arranged that the paper passes through them as it feeds around the platen.

19. In a type-writing machine, the combination with a platen, of a platen-frame, a rock-shaft extending longitudinally thereof, clamping-plates mounted upon said shaft, a finger-piece connected to said shaft, and opposing clamping-plates mounted upon the platen-frame.

20. In a type-writing machine, the combination with a platen, of a rock-shaft extending longitudinally of the platen and in rear thereof, plates mounted upon said shaft and overhanging the ends of the platen, and opposing plates normally separated from the plates upon said rock-shaft.

21. In a type-writing machine, the combination of a platen, a platen-frame, a rock-shaft journaled in said frame, clamping devices carried by said rock-shaft, opposing clamping devices mounted upon the frame, and a spring.

22. In a type-writing machine, the combination of a frame, paper-feeding devices thereon, a rock-shaft journaled in said frame, a crank upon said rock-shaft, clamping devices carried upon said rock-shaft, cooperating clamping devices mounted upon said frame, and a spring.

23. In a type-writing machine, the combination with devices for feeding superposed sheets of paper, of a clamp so mounted that one or more of the superposed sheets may pass between its opposing members, and the remaining sheet or sheets may pass outside of said opposing members, so that when the clamp is operated one or more sheets are held thereby and the remaining sheet or sheets may be moved independently thereof.

24. In a type-writing machine, the combination with a platen, of means for feeding superposed sheets, and means for mechanically holding the sheet or sheets nearest the platen stationary while the remaining sheet or sheets are adjusted or withdrawn.

25. In a type-writing machine, the combination of devices for feeding the paper, a

nation with devices for feeding superposed sheets of paper, of means for releasing the paper from the control of said feeding devices, and means for mechanically detaining one or more of the sheets after such release while the remaining sheet or sheets are adjusted or withdrawn.

26. In a type-writing machine, the combination with devices for feeding the paper, of means for releasing the paper from the control of said feeding devices, and a paper-clamp which is fixed with relation to the feed movement of the paper.

27. In a type-writing machine, the combination of a clamp so constructed and arranged that one or more sheets of paper may pass between its normally separated opposing faces and one or more superposed sheets of paper may pass outside of the clamp, devices for feeding all of the sheets, means for releasing said sheets from the control of said feeding devices, and means for closing said clamp.

28. In a type-writing machine, the combination of means for feeding the paper, including a pressure-roller, means for throwing off said pressure-roller, and a clamping device whereby one or more superposed sheets may be mechanically detained when said roller is thrown off.

29. In a type-writing machine, the combination of devices for feeding the paper, means for releasing the paper from said feeding devices, and a paper-clamp operatively connected to said releasing means.

30. In a type-writing machine, the combination with means, including a platen, for feeding superposed sheets of paper, of means for releasing said sheets from the control of said feeding devices, and means operating automatically when the sheets are released for clamping one or more of the released sheets so as to mechanically detain them while the remaining sheet or sheets are adjusted or withdrawn.

31. In a type-writing machine, the combination of means for feeding superposed sheets of paper, and means for releasing said sheets from the control of said feeding means and simultaneously gripping one or more of said sheets by its side edges, so that the remaining sheet or sheets may be independently adjusted or withdrawn.

32. In a type-writing machine, the combination of paper-feeding devices including a pressure-roller, means for releasing the paper from the control of the pressure-roller, and a normally open paper-clamp connected to said releasing means, said clamp being closed by the same movement that releases the paper from the control of the pressure-roller.

33. In a type-writing machine, the combination of a platen, a pressure-roller cooperating with said platen to feed the paper, means for throwing off said pressure-roller, and a normally open paper-clamp connected to said

throwing-off means and arranged at the receiving side of the platen.

34. In a type-writing machine, the combination of a pressure-roller, a device cooperating therewith for feeding the paper, a rock-shaft having means for throwing off said roller, and a normally open paper-clamp operatively connected to said rock-shaft.

35. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller, a rock-shaft journaled in the platen-frame, means controlled by said rock-shaft for throwing off the pressure-roller, a paper-clamping device upon said rock-shaft, and an opposing paper-clamping device upon the platen-frame.

36. In a type-writing machine, the combination with a platen, of a platen-frame, a pressure-roller, a rock-shaft extending longitudinally of the platen, means controlled by said rock-shaft for throwing off the pressure-roller, paper-clamping devices arranged one at each end of the platen and mounted upon said rock-shaft, and opposing clamping devices carried by the platen-frame.

37. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller carried by arms which are pivoted upon said platen-frame, a rock-shaft journaled in said frame and extending longitudinally of the platen, tappets upon said rock-shaft for moving the pressure-roller arms away from the platen, clamping-plates mounted upon said shaft and arranged one at each end of the platen, and opposing clamping-plates mounted upon the platen-frame.

38. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller carried by arms which are pivoted upon said platen-frame, a rock-shaft journaled in said frame and extending longitudinally of the platen, tappets upon said rock-shaft for moving the pressure-roller arms away from the platen, clamping-plates mounted upon said shaft and arranged one at each end of the platen, opposing clamping-plates mounted upon the platen-frame, and a crank upon said rock-shaft.

39. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller, a rock-shaft mounted in the platen-frame in rear of the platen and having means for throwing off said pressure-roller, clamping devices mounted upon said rock-shaft and arranged one on each end of the platen, each of said clamping devices having an inwardly-extending portion which overhangs the platen, and clamping devices mounted upon the platen-frame, and having inwardly-extending portions opposed to the inwardly-extending portions of the first-mentioned clamping devices.

40. In a type-writing machine, the combination with paper-feeding devices, of a rock-shaft having means for releasing the paper from the control of said feeding devices, a

crank upon said shaft, paper-clamping devices mounted upon said shaft, and opposing clamping devices.

41. In a type-writing machine, the combination with a platen and a platen-frame, of a pressure-roller arranged at the receiving side of the platen, a normally open clamp also arranged at the receiving side of the platen, and means for simultaneously throwing off said pressure-roller and closing said clamp.

42. In a type-writing machine, the combination with means for feeding paper, of a clamp which is open during the paper-feeding operation, and means for locking said clamp in its closed position.

43. In a type-writing machine, the combination of a paper-clamping device, a spring for holding said clamp open so that the paper may feed therethrough during the writing operation, and means for locking said clamp in its closed position.

44. In a type-writing machine, the combination with paper-feeding devices, of a normally open clamp through which the paper feeds, and a locking-lever connected to said clamp, the latter being closed and locked by one stroke of said lever.

45. In a type-writing machine, the combination of paper-feeding devices, a rock-shaft, a clamping device thereon, an opposing clamping device, a crank upon said rock-shaft, and an operating-lever connected to said crank by a link.

46. In a type-writing machine, the combination of a platen, a rock-shaft, a clamping device thereon, an opposing clamping device, a crank upon said shaft, and a locking-toggle, one end of which is pivoted to said crank, the normal position of the rock-shaft being such that the clamp is open and the toggle being constructed both to rock the shaft so as to close the clamp and also to lock the latter in its closed position.

47. In a type-writing machine, the combination with a platen and a platen-frame, of a rock-shaft mounted in the platen-frame in rear of the platen, clamping devices mounted upon said shaft and arranged one at each end of the platen, opposing clamping devices upon the platen-frame, a crank at one end of said shaft, a link extending forwardly from said crank, and an arm or lever attached to said link and pivoted upon the forward portion of said platen-frame.

48. In a type-writing machine, the combination of paper-feeding devices including a pressure-roller, a normally open paper-clamping device, and means for locking said pressure-roller out of working position and locking said clamping device in working position.

49. In a type-writing machine, the combination of means for feeding paper, means for locking said feeding devices out of use, and a normally inactive device for clamping the paper after it is released from the control of said feeding devices.

50. In a type-writing machine, the combi-

nation of paper-feeding devices including a pressure-roller, a normally open paper-clamp, and a locking-lever connected to both the pressure-roller and the paper-clamp and constructed both to throw off the pressure-roller and lock it and also to close the clamp and lock it.

51. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller, a normally open paper-clamp, a rock-shaft controlling said paper-clamp, means for enabling said rock-shaft to throw off said pressure-roller, a crank upon said rock-shaft, and a locking-toggle one end of which is connected to said crank and the other end of which is connected to said platen-frame.

52. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller carried by arms which are pivoted upon the platen-frame, a rock-shaft journaled in the platen-frame, tappets upon said rock-shaft for moving said pressure-roller arms, clamping devices mounted upon said rock-shaft and arranged one at each end of the platen, opposing clamping devices mounted upon the platen-frame, a crank upon said rock-shaft, and a lever mounted upon the platen-frame and connected to said crank.

53. In a type-writing machine, the combination of a platen, a platen-frame, a pressure-roller, a paper-clamp, a locking-toggle, and connections from said toggle to said pressure-roller and said paper-clamp.

54. In a type-writing machine, the combination of a platen, a platen-frame, and a blade mounted upon the upper ends of arms which are hinged at their lower ends upon the front bar of the platen-frame, said blade normally standing away from the platen and being movable upon said arms into contact therewith.

55. In a type-writing machine, the combination of a platen, a platen-frame, lugs carried by the platen-frame, and adjustable in a direction transverse to the platen, and a blade mounted upon arms which are hinged upon said lugs, said blade extending for practically the entire length of the platen.

56. In a type-writing machine, the combination of a platen, a platen-frame, brackets arranged upon the platen-frame and adjustable longitudinally of the platen, lugs carried by the brackets and adjustable transversely of the platen, and a blade carried by arms which are hinged upon the lugs, said blade extending the entire length of the platen and normally standing out of operative relation therewith.

57. In a type-writing machine, the combination of a platen, a platen-frame, adjustable brackets, adjustable lugs thereon, arms, blade, and struts.

58. In a type-writing machine, the combination of a device for supporting a roll or web of paper, devices for feeding said web together with one or more superposed sheets of paper, and means for mechanically de-

taining said superposed paper during an independent advance movement of the web.

59. In a type-writing machine, the combination of means for supporting a roll or web of paper, a platen, means for feeding said web around the platen together with one or more superposed sheets, means for advancing said web around the platen while said sheets remain stationary, and means at the delivery side of the platen for severing said web.

60. In a type-writing machine, the combination of a device for supporting a roll or web of paper, means for feeding said web together with one or more superposed sheets of paper, a device for clamping said superposed paper at will so as to prevent movement thereof during an independent advance movement of the web, and means for severing the web.

61. In a type-writing machine, the combination of a device for supporting a roll or web of paper, means for feeding said web together with one or more superposed sheets of paper, a normally open clamp through which only said superposed paper is fed, means for closing said clamp upon the paper, and a web-severing blade.

62. In a type-writing machine, the combination of a platen, a platen-carriage, means upon said carriage for supporting a roll of paper, a pressure-roller for feeding said web around the platen, and a normally open paper-clamp mounted upon said platen-carriage and so arranged at the receiving side of the platen that additional sheets of paper may pass through said clamp as they feed around the platen, while the web may pass outside of the clamp.

63. In a type-writing machine, the combination of a truck, a device carried thereby for supporting a roll or web of paper, a platen, a platen-frame connected to said truck, a pressure-roller for feeding the web around the platen, a clamping-plate pivotally supported upon the platen-frame and arranged at the receiving side of the platen, an opposing plate fixed upon the platen-frame, means for moving the first plate to the second plate so as to clamp one or more sheets of paper which may be introduced between the web and the platen, and a blade for severing the web.

64. In a type-writing machine, the combination of a carriage having means for supporting a roll or web of paper, a platen upon said carriage, a pressure-roller for feeding the web around said platen, normally open clamps arranged one at each end of the platen so that sheets inserted between the web and the platen may pass through said clamps as they feed around the platen together with the web, and means for closing said clamps.

65. In a type-writing machine, the combination of a device for supporting a roll or web of paper, devices for feeding said web together with one or more superposed sheets of paper, means for releasing both the web and the superposed sheets from the control of said

feeding devices, and means for mechanically detaining the superposed sheets after such release and while the web is independently advanced.

66. In a type-writing machine, the combination of a device for supporting a roll or web of paper, devices for feeding said web together with one or more superposed sheets of paper, means for releasing both the web and the superposed sheets from the control of said feeding devices, means for mechanically detaining the superposed sheets after such release and while the web is independently advanced, and a blade for severing the web.

67. In a type-writing machine, the combination of a device for supporting a roll or web of paper, devices for feeding said web together with one or more superposed sheets of paper, means for releasing said web and superposed sheets from the control of said feeding devices, a clamp for holding the superposed sheets stationary, and a severing-blade.

68. In a type-writing machine, the combination of a device for supporting a web or roll of paper, devices for feeding the web, together with one or more superposed sheets of paper, means for releasing the web and superposed sheets from said feeding devices, and a normally open clamp operatively connected to said releasing means, the construction and arrangement being such that the superposed sheets may feed through said paper-clamp while the web passes outside thereof.

69. In a type-writing machine, the combination of a device for supporting a roll or web of paper, a platen, a pressure-roller cooperating with said platen to feed said web together with one or more superposed sheets of paper, means for throwing off said pressure-roller, and a normally open paper-clamp connected to said throwing-off means and arranged at the receiving side of the platen so that said superposed sheets may feed through said clamp.

70. In a type-writing machine, the combination of a device for supporting a roll or web of paper, a platen, a pressure-roller, a rock-shaft, means controlled by said rock-shaft for throwing off the pressure-roller, a paper-clamping device mounted upon said rock-shaft, and an opposing clamping device.

71. In a type-writing machine, the combination of a device for supporting a roll or web of paper, means for feeding said web together with one or more superposed sheets of paper, a clamp which is open during the paper-feeding operation, said clamp being adapted to grip said superposed paper, and means for locking said clamp in its gripping position.

72. In a type-writing machine, the combination of a device for supporting a roll or web of paper, means for feeding said web together with one or more superposed sheets of paper, a clamp which is open during the paper-feeding operation, said clamp being adapted to grip said superposed paper, means for locking said clamp in its gripping position, and

means for releasing said web from the control of said paper-feeding devices.

73. In a type-writing machine, the combination of devices for feeding paper, devices for clamping the paper, and a movable severing-blade operatively connected to said clamping devices.

74. In a type-writing machine, the combination of releasable paper-feeding devices, and a movable severing-blade operatively connected thereto.

75. In a type-writing machine, the combination of releasable paper-feeding devices, a normally open paper-clamp, and a movable blade operatively connected to both said paper-feeding devices and said clamp.

76. In a type-writing machine, the combination of a device for supporting a roll or web of paper, devices for feeding said web, means for releasing the web from said feeding devices, and a movable severing-blade operatively connected to said releasing devices.

77. In a type-writing machine, the combination of a device for supporting a roll or web of paper, a normally open paper-clamp, and a movable severing-blade operatively connected to said clamp.

78. In a type-writing machine, the combination of a device for supporting a roll or web of paper, releasable paper-feeding devices, a normally open paper-clamp, and a movable blade connected to both said paper-feeding devices and said clamp.

79. In a type-writing machine, the combination of means for supporting a roll or web of paper, means for feeding said web together with one or more superposed sheets, a severing-blade, and means for moving said severing-blade to working position and simultaneously both releasing said web and clamping said superposed sheets.

80. In a type-writing machine, the combination of a platen, a device arranged in rear of the platen for supporting a roll or web of paper, a pressure-roller, a normally open clamp arranged at the receiving side of the platen, and a movable blade arranged at the delivery side of the platen and operatively connected to both the clamp and the pressure-roller.

81. In a type-writing machine, the combination of a platen, means for supporting a roll or web of paper, a pressure-roller, a rock-shaft including means for throwing off said pressure-roller, a paper-clamping device upon said rock-shaft, a pivotally-mounted blade at the delivery side of said platen, and connections from said blade to said rock-shaft.

82. In a type-writing machine, the combination of means for supporting a roll or web of paper, a platen, a pressure-roller, a rock-shaft having means for casting off said pressure-roller, a crank upon said rock-shaft, a hinged blade at the delivery side of the platen, and a link connecting said blade to said crank.

83. In a type-writing machine, the combination of a device for supporting a roll or web

of paper, a platen, a pressure-roller cooperating with said platen to feed the paper, a paper-clamping device, a movable blade arranged at the delivery side of said platen, and means for locking said pressure-roller away from the platen and locking both said clamp and said blade in working position.

84. In a type-writing machine, the combination of means for feeding a web of paper, a normally inactive clamp for holding sheets superposed upon said web, means for locking said clamp in its closed position, and a blade for severing said web.

85. In a type-writing machine, the combination of a platen, a pressure-roller, means for locking said pressure-roller away from said platen, a clamp for detaining sheets of paper superposed upon said web, and a blade for severing said web.

86. In a type-writing machine, the combination of a device for supporting a roll or web of paper, a platen, a pressure-roller, a normally open clamp, a severing-blade, and means for casting off the pressure-roller and simultaneously closing said clamp and moving said blade to operative position.

87. In a type-writing machine, the combination of paper-feeding devices including a pressure-roller, a crank connected to means for throwing off said pressure-roller, a paper-clamp connected to said crank, and a severing-blade having means for operating and locking said crank.

88. In a type-writing machine, the combination of a platen, a rock-shaft parallel therewith, paper-clamping devices on said rock-shaft, opposing clamping devices, a pressure-roller, means controlled by said rock-shaft for casting off said pressure-roller, a crank upon said rock-shaft, a hinged severing-blade, and a link connecting said crank to said blade.

89. In a type-writing machine, the combination of a platen, a rock-shaft parallel therewith, paper-clamping devices on said rock-shaft, opposing clamping devices, a pressure-roller, means controlled by said rock-shaft for casting off said pressure-roller, a crank upon said rock-shaft, a hinged severing-blade, and a link connecting said crank to the blade, said link and blade taken together forming a toggle which is constructed to lock said crank and blade in working position.

90. In a type-writing machine, the combination of a platen, a pressure-roller, a rock-shaft having means for casting off said pressure-roller, a paper-clamping device upon said rock-shaft, an opposing clamping device, a crank upon said rock-shaft, an adjustably-hinged severing-blade, and a link connecting said blade to said crank.

91. In a type-writing machine, the combination of a device for supporting a roll or web of paper, pivotally-supported severing-blade, and screw for adjustably limiting the throw of said blade.

92. In a type-writing machine, the combination of a device for supporting a roll or web

of paper, a pivoted severing-blade 60, means for feeding the paper, a crank having means for releasing the paper from the control of the feeding devices, links 68 connecting said crank to said severing-blade, and screw 70 for adjustably limiting the movement of the link and crank.

93. In a type-writing machine, a frame comprising side bars 43, upper deflector-bar 44 and lower bar 45, and pivots 48 in said side bars.

94. In a type-writing machine, a frame comprising side bars 43, upper deflector-bar 44 and lower bar 45, pivots 48 in said side bars, and adjustable paper-guard 56.

95. In a type-writing machine, a spool for carrying a roll of paper, comprising hollow core 51, a flange fixed to one end thereof, bushing 54 rearwardly fitted in the other end thereof, and a flange fixed to said bushing.

96. In a type-writing machine, the combination with a platen and a platen-frame, of a block 33 mounted upon the front bar of said platen-frame, a plate 30 pivoted upon said block and constructed to guide the paper at the front of the platen, and a finger-piece 18 in the form of a yoke attached to said plate and extending forwardly over the front bar of the platen-frame.

97. In a type-writing machine, the combination with a platen and a platen-frame, of means for supporting a roll or web of paper, a severing-blade, and a gage 56 which may be reached by the leading end of the web when the severing-line upon the web is in register with said blade.

98. In a type-writing machine, the combination with a platen and a platen-frame, of means for supporting a roll or web of paper, a severing-blade, and an adjustable gage for positioning the web with reference to said blade.

99. In a type-writing machine, the combination of a platen, line-feeding devices adapted to feed two blank sheets and an intermediate carbon-sheet, and means for retaining the carbon and inside sheet against movement when the outside sheet is moved independently.

Signed in the borough of Manhattan, city of New York, in the county of New York and State of New York, this 2d day of April, A. D. 1901.

DANIEL BRIGGS.

STEPHEN H. FARNHAM.

Witnesses:

K. V. DONOVAN,
E. M. WELLS.