

L. D. CAMPS.
ATTACHMENT FOR WRITING MACHINES.
APPLICATION FILED DEC. 9, 1907.

955,846.

Patented Apr. 26, 1910.

4 SHEETS—SHEET 1.

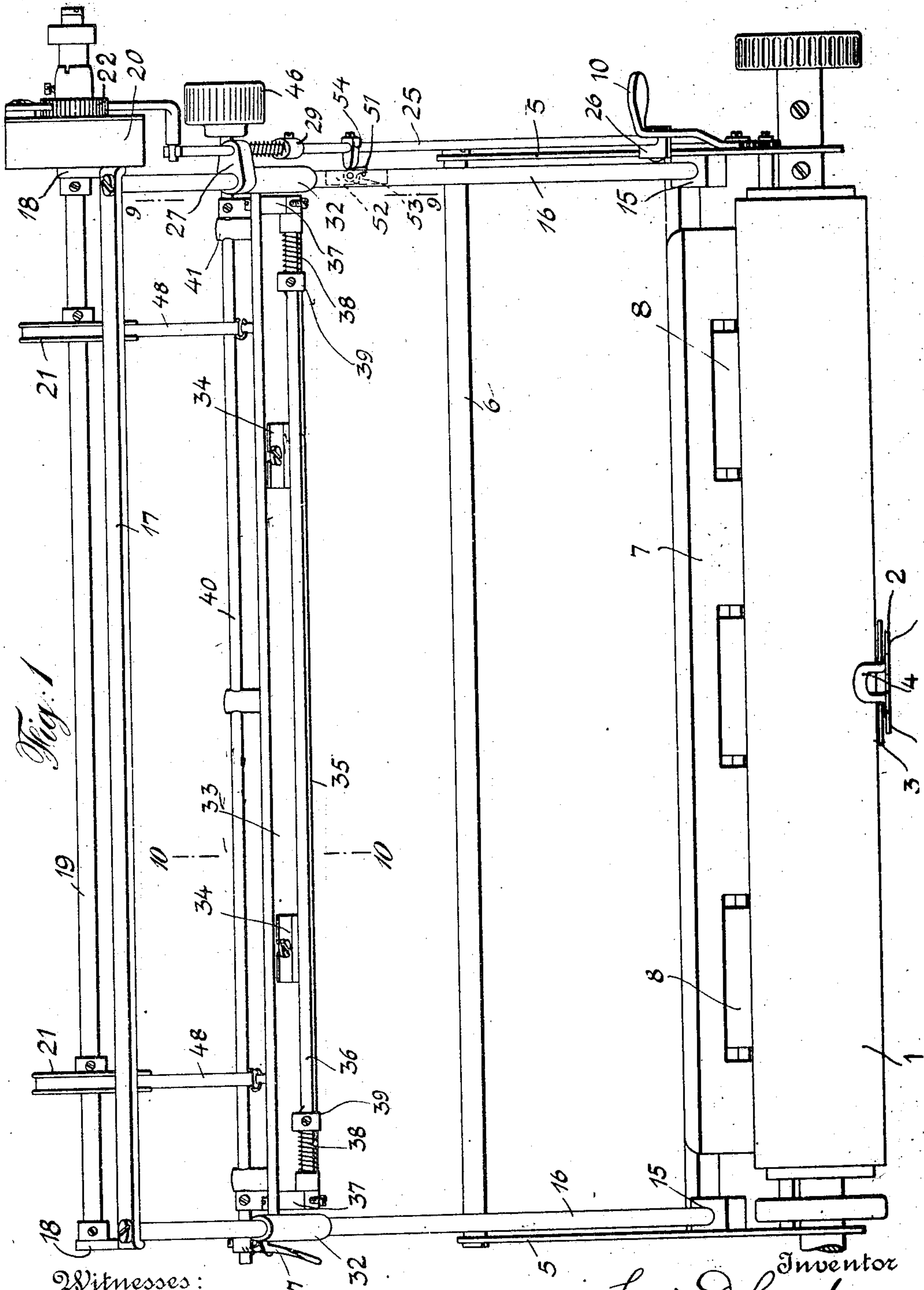


Fig. 1

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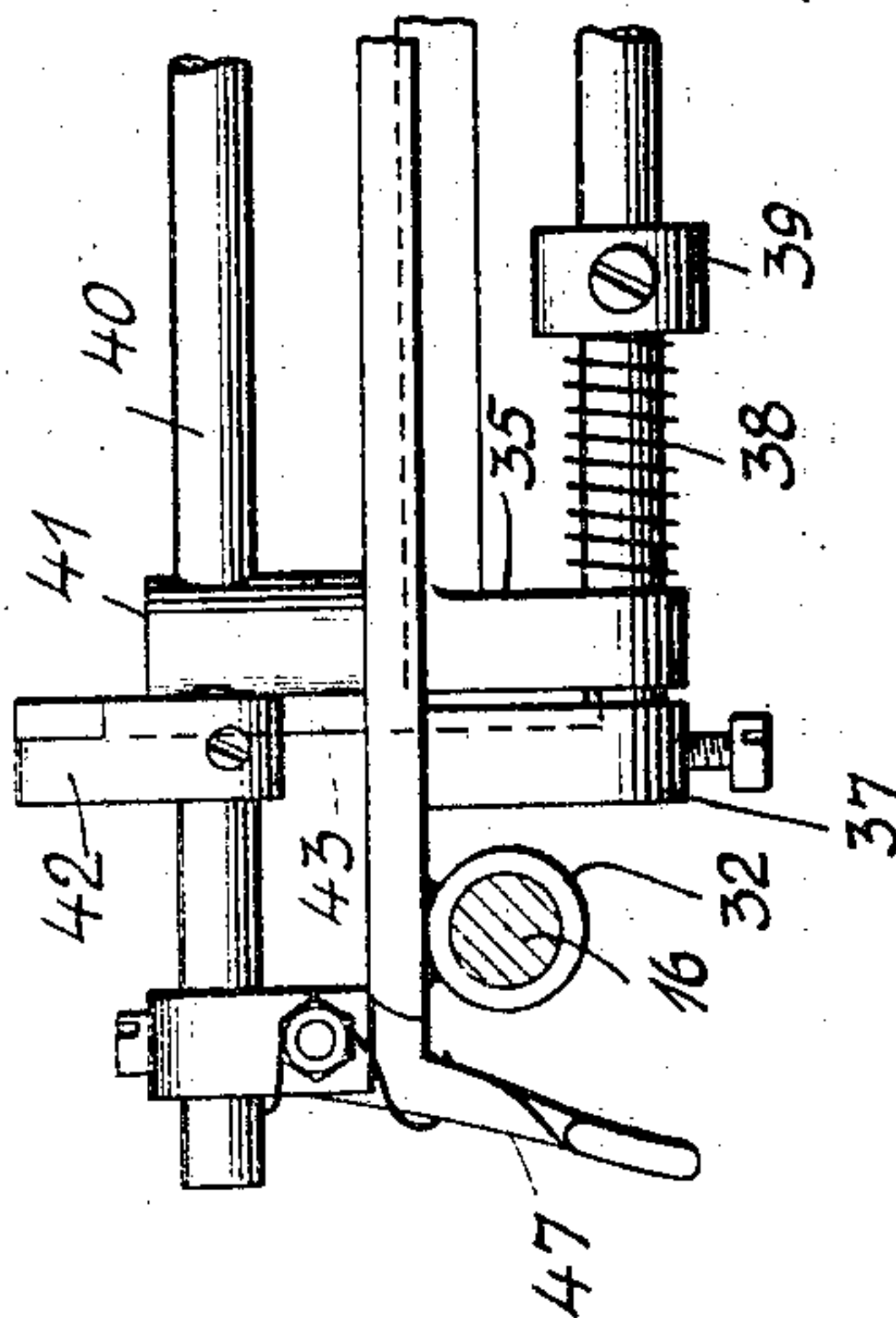
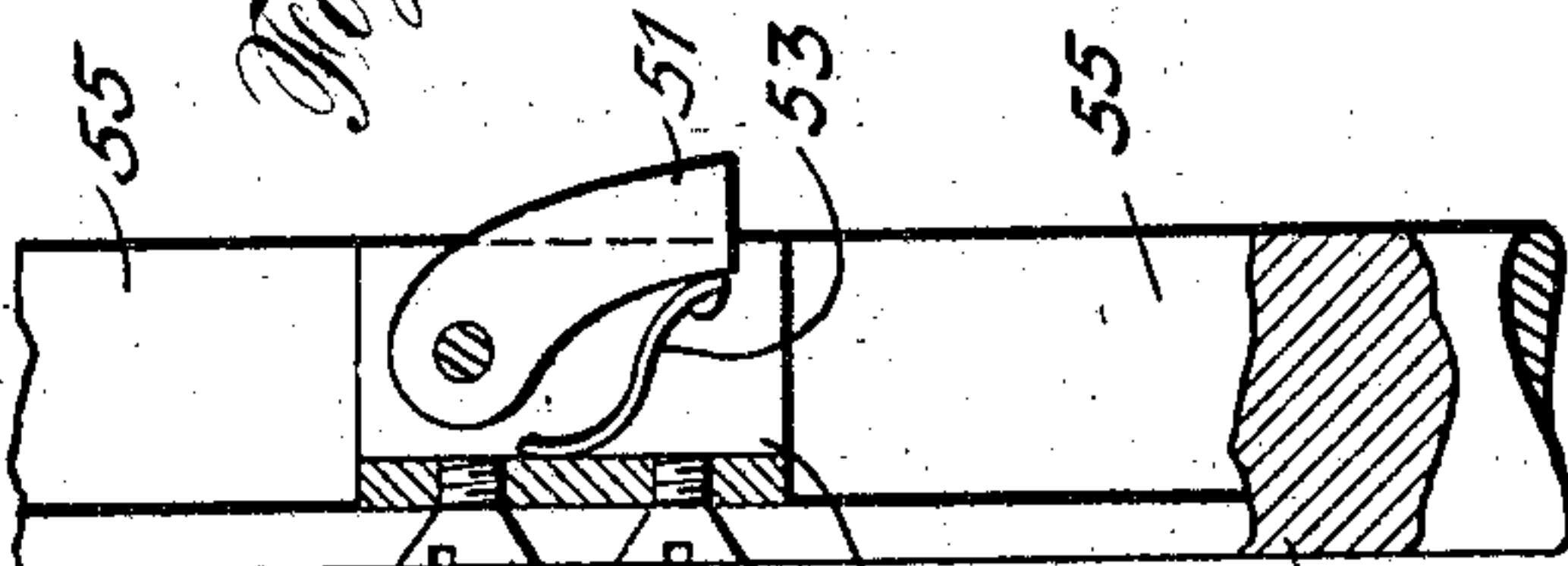
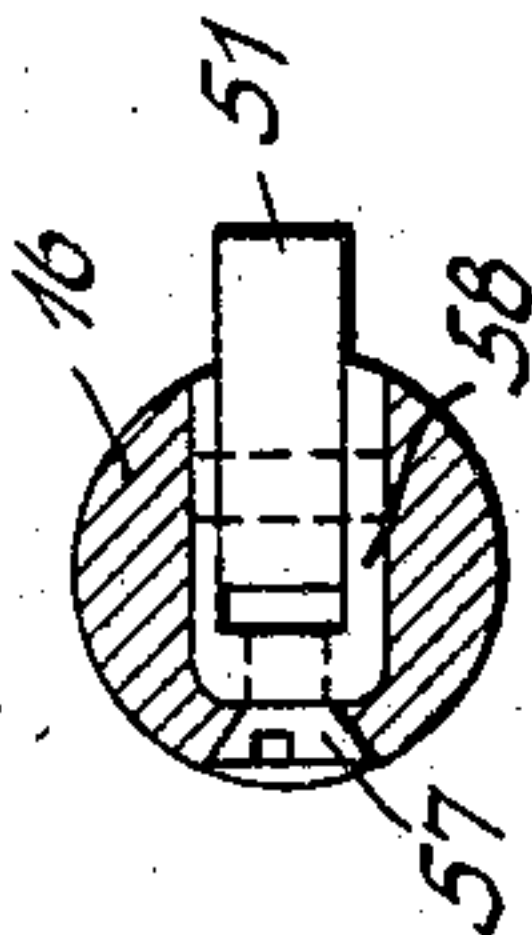
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Fig. 2 is a perspective view of a mechanical assembly. It features a long, angled shaft (25) with a handle (16) at one end. A gear (28) is mounted on the shaft, which is connected to a larger gear (24) via a smaller gear (23). A spring (27) is attached to the shaft. A lever (30) is pivoted at one end (18) and has a curved end (20) with a serrated edge (24). A small gear (29) is mounted on the shaft near the lever. A component (46) is also visible near the gear (28).

Fig. 3 is a cross-sectional view of a mechanical assembly. It shows a central shaft (16) passing through a housing. A lever (37) is pivoted at one end (32) and has a curved end (38) with a serrated edge (39). A spring (35) is attached to the shaft. A component (40) is mounted on the shaft. A small gear (41) is mounted on the shaft near the lever. A component (42) is also visible near the gear (41). A component (43) is mounted on the shaft near the lever. A component (37) is also visible near the gear (41).



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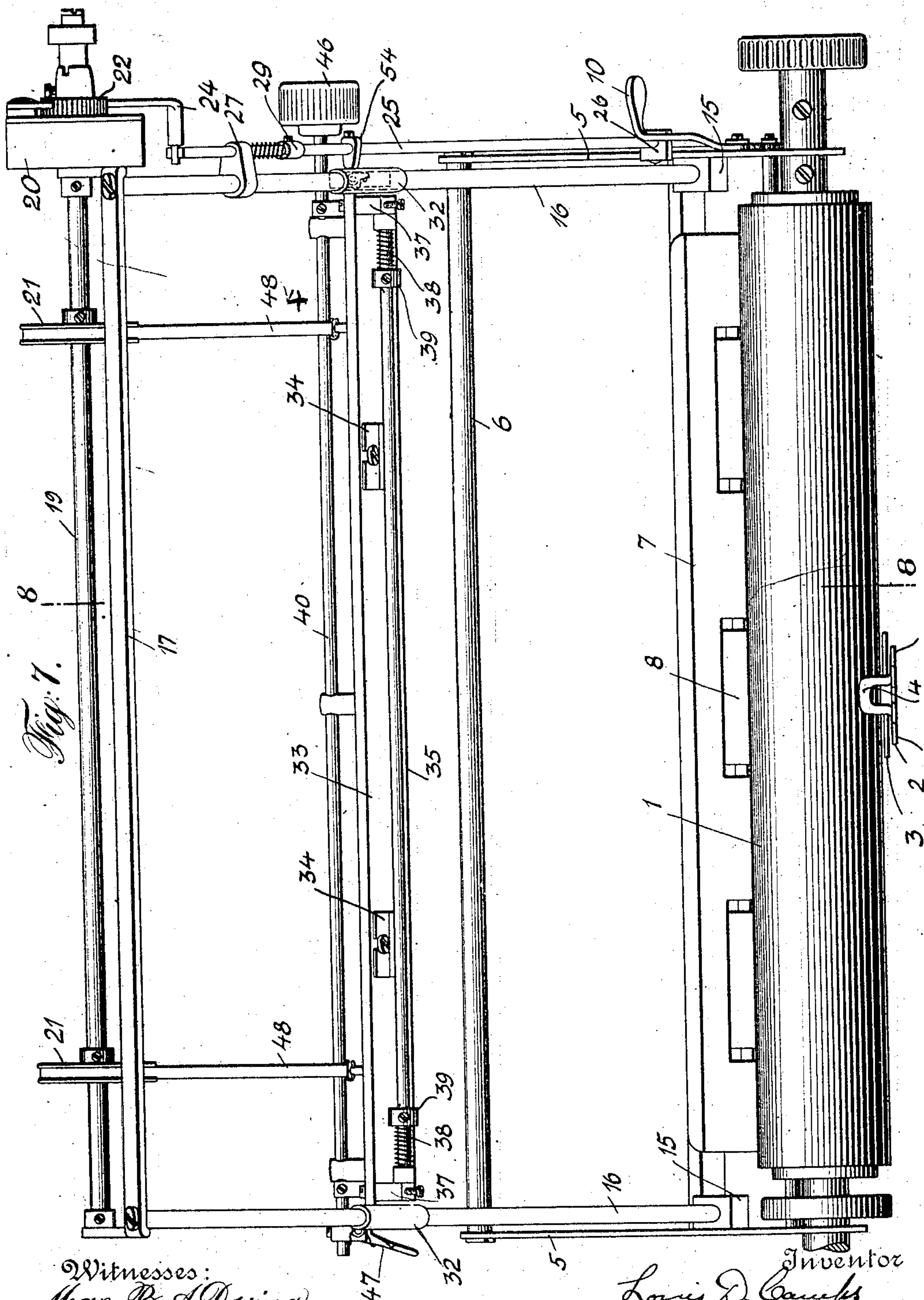


Fig. 7.

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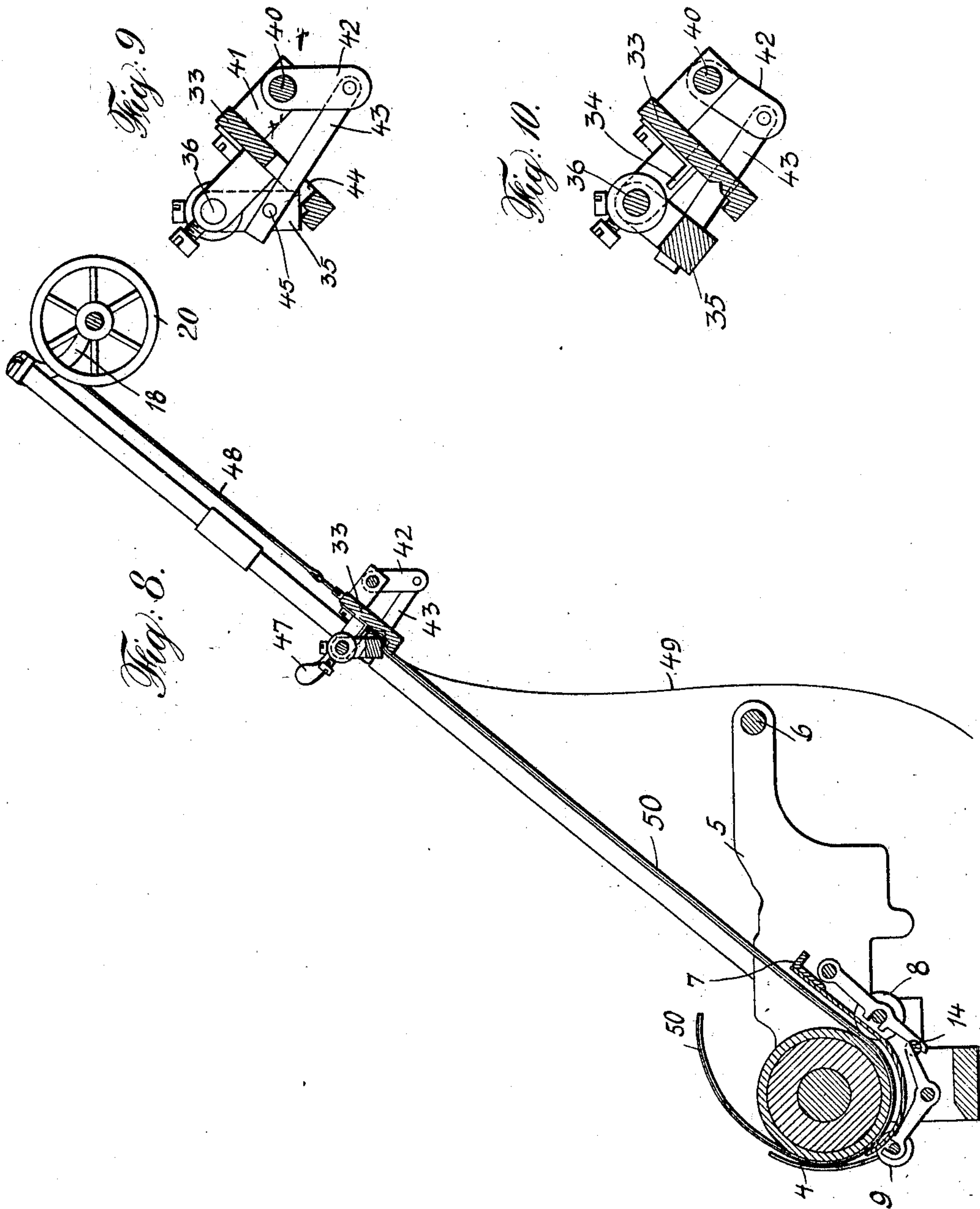
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

LOUIS D. CAMPS, OF NEW YORK, N. Y., ASSIGNOR TO ROYAL TYPEWRITER COMPANY,
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ATTACHMENT FOR WRITING-MACHINES.

955,846.

Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed December 9, 1907. Serial No. 405,636.

To all whom it may concern:

Be it known that I, LOUIS D. CAMPS, a citizen of the United States of America, residing in the borough of Brooklyn, city and State of New York, have invented a certain Improved Attachment for Writing-Machines, of which the following is a specification.

This invention comprises an attachment for typewriting machines for performing what is known, as split-order or split-billing work, and for addressing circular letters, or for still other purposes to which it may be applicable. In so-called split-order work a wholesale establishment may receive an order for articles from various of its departments to each of which a separate order should be sent. All such separate, or sub-orders, should contain the same information, data or instructions, such as the name of the consignee, mode of shipping, packing, terms of payment, etc. In making up such an order, sheets printed with suitable caption blanks are placed in the machine with carbon paper intermediate the captions of the sheets and all such general data is printed at one operation. The order for one department of the house is then printed upon the first sheet below the caption, that sheet is removed, and so on until all the department orders have been prepared. Devices for accomplishing this general operation have heretofore been proposed.

The characteristic feature of the present invention is that the assemblage of order sheets is clamped or held at the rear or bottom edges of the sheets. The clamp device must, of course, be so constructed and arranged that during the operation of printing as the multiple sheets are fed around the platen, it will yield or follow the sheets. When the outer sub-order sheet has been printed the clamp device is returned to an initial position, the outermost sheet removed from the platen although it may still be held by the clamp, and printing upon the second sheet proceeded with. Such is the mode of operation of apparatus constructed in accordance with this invention. It has the advantage that the sheets that are, one by one, removed or displaced from the platen are still held at their rear edges by the clamping or holding means.

In the accompanying drawings: Figure 1 is a plan view: Fig. 2, a side elevation: Fig. 3, an enlarged detail view of one end of a paper clamp or holding means that I have elected to illustrate: Figs. 4, 5 and 6 are respectively detail views on an enlarged scale showing one of the adjusted stops that may be employed to determine the distance to which the assemblage of sheets in the machine may be retracted after completion of printing an order upon the outer one; Fig. 7 is a plan view similar to Fig. 1 showing the parts in a different position: Fig. 8, a vertical longitudinal section on the line 8, 8, of Fig. 7: Fig. 9, a cross section of the paper clamp on the line 9, 9, of Fig. 1: and Fig. 10, a cross section on the line 10, 10, of Fig. 1.

The special construction of the several parts of the apparatus illustrated have been shown by experiment to efficiently perform the desired operations but the invention is not limited to such details.

The invention is shown as applied to the Royal Typewriter Company's Standard machine. It may, however, be applied to machines of other style and other manufacture. The paper feed devices cooperating with the platen are such as have been used in the Royal Typewriter Company's Standard machine but, of course, any appropriate kind of paper feed devices may be employed.

1 is the platen, 2 the ribbon vibrator and 3 a center paper holder having an opening 4 through which the type strike.

5 indicates the end plates of the carriage, 6 a transverse bar connecting them, and 7 the paper table extending between the side plates.

8 is the rear feed roll, and 9 the front one.

10 is the release lever for throwing off the paper feed. Concentrically to the axis 11 the release lever is formed with gear teeth meshing with a pinion 13 on a rock shaft 14 transversely notched to receive the ends of the levers that carry the feed rolls and by rotation of which the lever ends are caused to ride upon the high parts of the shaft so that the feed rolls are withdrawn from the platen.

Mounted upon the side plates of the carriage in any appropriate way, as by blocks 15, 15, are parallel side bars 16 of a frame

that extends rearwardly and upwardly from the carriage, the side bars being connected by a cross bar 17 extending between the ends thereof. In brackets 18 extending rearwardly from the cross bar 17 is mounted the shaft 19, of a spring barrel 20, carrying grooved pulleys 21. The spring barrel is provided with a usual ratchet 22 and detent pawl 23 having an elongated curved tripping tail 24 that extends to a point adjacent one of the side bars 16 of the frame. Co-operating with the end 24 of the pawl is an endwise movable bar 25 mounted to slide in fixed guide blocks 26, 27, the former of which may be applied to the end plate of the typewriter carriage and the latter of which may be adjustably secured by a set screw 28 on the side bar 16. A coiled spring surrounding the rod 25 and interposed between the guide block 27 and an adjustable collar 29 on the rod 25 serves, by its reaction, to urge the rod 25 downwardly. When the rod is moved upwardly, its forked end 30 acts upon the pawl 24, 23, and throws it out of engagement with the ratchet of the spring drum reaction of which will restore the parts to normal position as is hereinafter described. The spring drum should be tripped at the time the release lever is operated to throw off the feed rolls and the operation of moving the rod to trip the spring drum pawl may be conveniently effected by placing on the release lever a cam faced arm 31 by which the rod is urged upwardly when the release lever 10 is drawn forward to throw off the feed rolls. Extending between the side bars 16 and carried by sleeves 32, 32, that slide on these bars is a paper clamp that may be constructed as follows. Rigid with the sleeves is a transverse plate 33 provided with paper gages 34. Coöperating with this plate is a spring pressed clamping bail 35 whose ends rock about a transverse shaft 36 held in posts 37 on the transverse plate 33. Coiled springs 38 applied to the rod 36 adjacent its ends have each one end attached to a collar 39 on the rod and the other end is connected with the bail 35 so that the reaction of the springs tends to urge the bail downwardly into contact with plate 33. The bail may be raised by a rock shaft 40 turning in bearings in lugs 41 on the under face of plate 33 and having radial arms 42 to which are pinned pitman links 43 extending through apertures 44 in plate 33 and pivoted at 45 to the ends of the bail or clamp bar 35. When the bar 35 is raised by turning shaft 40, which is provided with a knurled head 46, it will be held up by a spring latch 47 at the left hand side of the attachment which then engages the upper edge or corner of the transverse plate 33. In this condition, the paper sheets may be inserted against the gages on the plate 33 and the

latch 47 tripped. The sliding clamping frame is to be suitably connected with the shaft 19 of the spring barrel. This may be conveniently accomplished by the tapes 48 wound upon the grooved pulleys 21 and connected to plate 33.

The operation of the apparatus thus far described is no doubt obvious but may be briefly stated. An assemblage of sheets clamped at their rear ends is fed around the platen in the ordinary way, the spring barrel yielding and the clamp moving with the sheets. When printing upon a sheet has been completed, the release lever is operated to throw off the feed rolls and simultaneously trip the spring drum, the reaction of which draws up the clamp and with it the attached sheets that are now loosely disposed around the platen. With the devices in this condition, the outermost sheet that has just been printed may be withdrawn, the others remaining around the platen, and the one withdrawn allowed to hang from the clamp as indicated at 49 in Fig. 8. 50 indicates the assemblage of sheets remaining in the machine.

Movement of the paper clamp away from the platen, when the spring barrel is tripped, may be limited by abutment of one of the sleeves 32 against the block 27 on the frame bar 16. This stop may be adjusted since both it and the collar 29 are adjustably mounted one upon the frame bar 16 and the other upon the endwise movable tripping rod 25. This stop may be set so that when the sheets are drawn rearwardly away from the platen they will be arrested at the point at which printing is to be commenced on the next sheet. The clamp 4 acts frictionally upon the sheets to prevent their momentum from disarranging them. Other stops may be employed, such for instance, as a latch 51 pivoted in a recess 52 in the outer face of the right hand side bar 16. It has applied to it a spring 53 whose reaction tends to throw it outwardly as in Figs. 1, 4 and 6.

On the endwise movable spring barrel tripping bar 25 is adjustably mounted a block 54 that operates to press the latch stop 51 inwardly at the proper time. The operation may be as follows: When the release lever is drawn forward, the paper feed thrown off and the spring barrel tripped, block 54, which in normal position of the release lever bears upon the latch pressing it inwardly as seen in Fig. 1, is moved upwardly, the latch 51 springs out and the sleeve 32, abutting against it, arrests retreat of the paper clamp. When the release lever is moved back and the tripping rod returns to normal position, the spring barrel is reengaged by its pawl, and block 54 presses the latch 51 inwardly. This stop may serve as the one to determine the initial position of the successive sheets during the printing of the order

items. Sleeve 32 may pass between the latch 51 and block 54 when the latter has pressed the latch inwardly. A stop such as 51 may or may not be used since the sheets may be brought to the desired line for printing by successive manipulations of the line space lever of the machine, or by direct rotation of the platen. If stops such as 51 be employed, as I prefer, they may be made adjustable. For that purpose, the block 54 is fixed adjustably on the tripping rod 25 by means of a set screw, and the latch 51 may be made adjustable lengthwise of the side bar 16 in any suitable manner, as, for instance, as shown in Figs. 4, 5, and 6, in which the outer face of the bar 16 is recessed longitudinally as at 55 and the inner face is formed with a slot 56 opening into the recess. The walls of the slot are inclined to correspond with the inclination of the heads of short screws 57 that pass through the slot and engage threaded apertures in a U-shaped piece 58 between the sides of which is pivoted latch 51.

I claim:

1. An attachment for typewriting machines, comprising a means for holding the rear ends of an assemblage of sheets adapted to yield as the sheets are fed to the machine in the operation of printing, and means, acting on release of the feed devices, to retract such holding means and an adjustable stop serving to limit the extent to which the sheets are retracted.

2. An attachment for typewriting machines, comprising means movable away from the platen and adapted to hold the rear ends of an assemblage of sheets of paper, spring means tending to draw such paper holding means away from the platen but adapted to yield as the sheets are fed through the machine and means, acting on release of the paper feed devices of the machine, to cause the spring means to withdraw the paper holding means away from the platen, and an adjustable stop to limit the movement of the paper holding means away from the platen.

3. An attachment for typewriting machines, comprising an upwardly extending frame mounted on the carriage of the machine, a paper gripping device sliding on the frame and adapted to grip the rear ends of an assemblage of sheets to be fed to the machine, a spring drum tending to withdraw the paper gripping device away from the platen but of such strength as to permit said device to move toward the platen in the ordinary feed of the assemblage of sheets through the machine, means acting when the paper feed devices are released to trip the spring drum to permit it to retract the paper gripping device.

4. An attachment for a typewriting machine, comprising a device adapted to hold

the rear ends of an assemblage of sheets of paper to be fed through the machine, spring means yielding to permit the feed of the sheets through the machine, a paper feed release lever on the machine and means operated by said release lever to permit the reaction of such spring means to draw the paper holding device away from the platen.

5. An attachment for typewriting machines, comprising a means for holding the rear ends of an assemblage of sheets adapted to yield as the sheets are fed to the machine in the operation of printing, means, acting on release of the feed devices, to retract such holding means to a desired extent without withdrawing the leading ends of the assemblage of sheets from the machine and a friction device acting upon the sheets as they are drawn from the machine, and a stop for limiting such withdrawal.

6. An attachment for typewriting machines, comprising a frame having parallel side bars mounted upon the carriage of the machine and extending upwardly and rearwardly therefrom, a paper gripping device sliding on the said bars and adapted to grip the rear ends of an assemblage of sheets of paper to be fed to the machine, spring means attached to the gripping device and adapted to yield as the sheets are fed through the machine in the operation of printing, means acting to permit the spring means to withdraw the paper gripping device when the assemblage of sheets is released from the paper feed devices of the machine and a stop for limiting retraction of the paper gripping device.

7. An attachment for typewriting machines, comprising a frame having parallel side bars mounted upon the carriage of the machine and extending upwardly and rearwardly therefrom, a paper gripping device sliding on the said bars and adapted to grip the rear ends of an assemblage of sheets of paper to be fed to the machine, spring means attached to the gripping device and adapted to yield as the sheets are fed through the machine in the operation of printing, means acting to permit the spring means to withdraw the paper gripping device when the assemblage of sheets is released from the paper feed device of the machine, and an adjustable stop for limiting retraction of the paper gripping device.

8. An attachment for typewriting machines, comprising a frame mounted upon the carriage and extending upwardly and rearwardly therefrom, a paper gripping device mounted on the frame to move toward and from the platen and adapted to grip the rear ends of an assemblage of sheets of paper to be fed through the machine, spring means applied to the paper gripping device and adapted to yield to permit the feed of the sheets through the machine and to re-

tract the gripping device when the paper
feed devices of the machine are released, a
stop for limiting the extreme extent of such
retraction, a second stop adapted to limit the
5 gripping device to a less extent of retrac-
tion, and means whereby when the paper
feed devices of the machine are thrown off
said spring means are permitted to retract

the paper gripping device until arrested by
said second stop. 10

In testimony whereof, I have hereunto
subscribed my name,

LOUIS D. CAMPS.

Witnesses:

JOHN M. LEE,
L. F. BROWNING.