

J. ALEXANDER.
TYPE WRITING MACHINE RIBBON OPERATING AND FEEDING MECHANISM.
APPLICATION FILED JUNE 8, 1912.

1,048,267.

Patented Dec. 24, 1912.

3 SHEETS-SHEET 1.

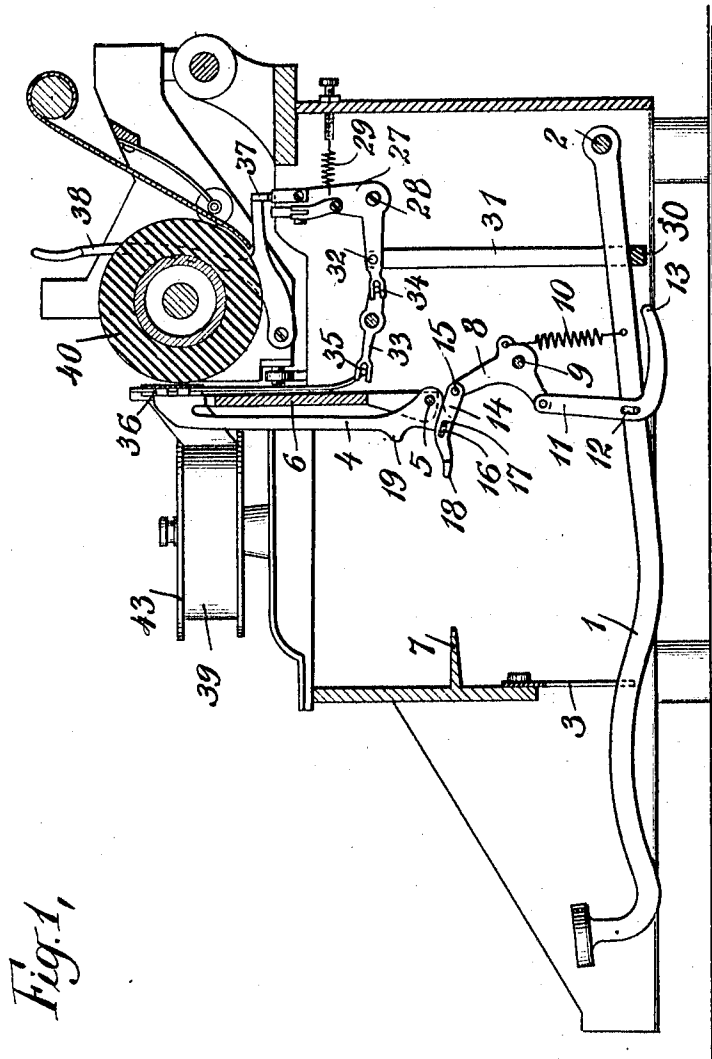


Fig. 1,

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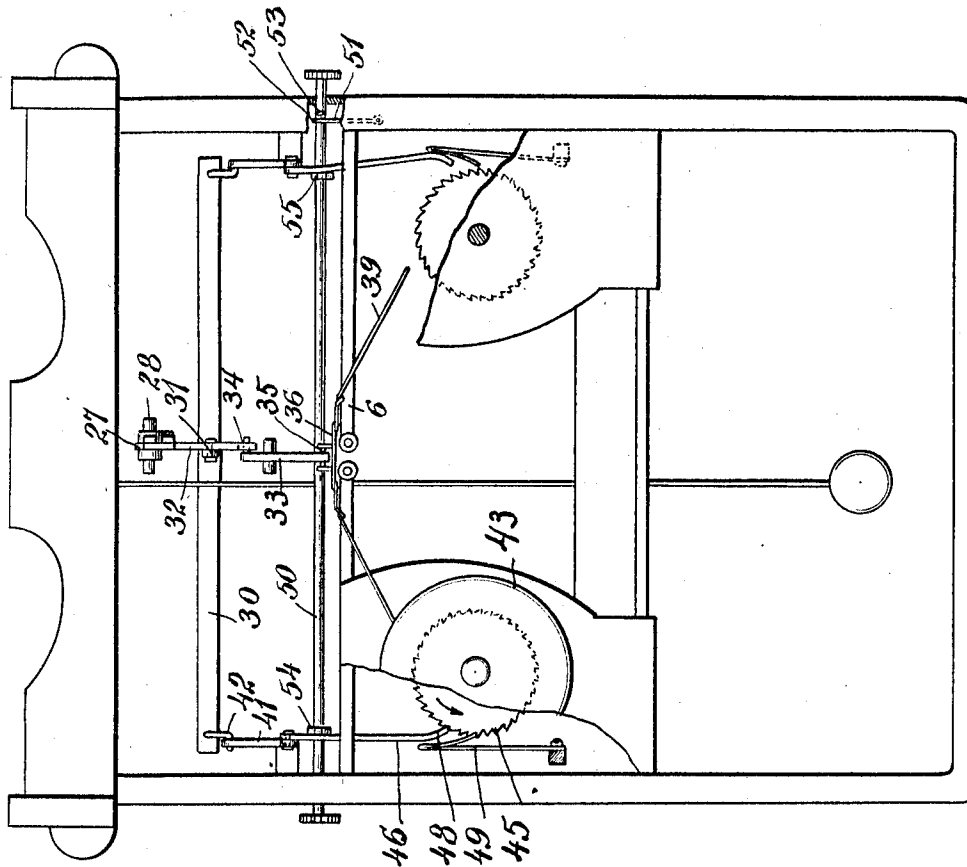


Fig. 2.

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3 SHEETS-SHEET 3.

Fig. 3,

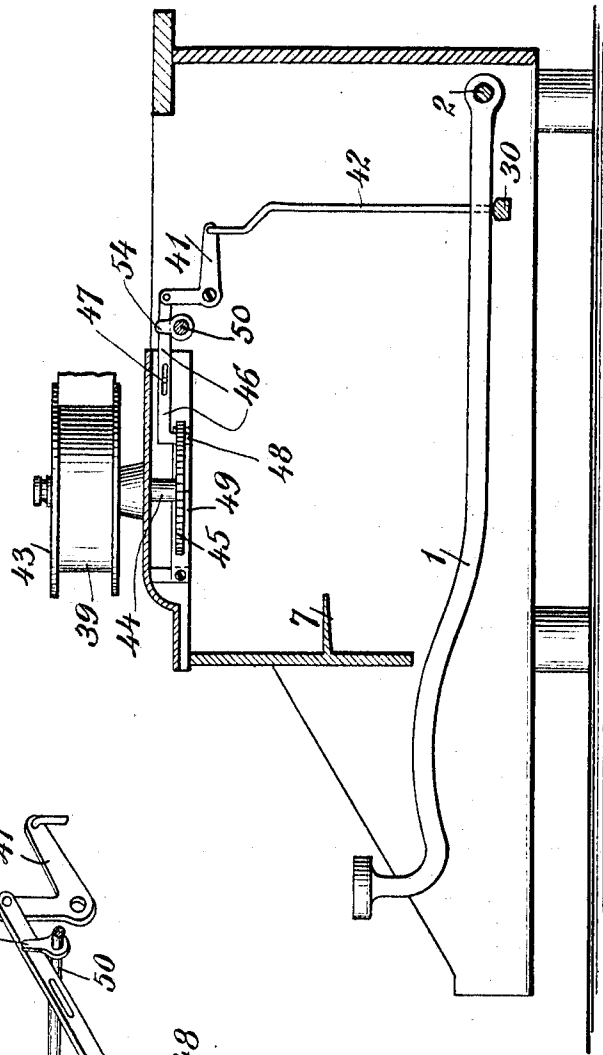
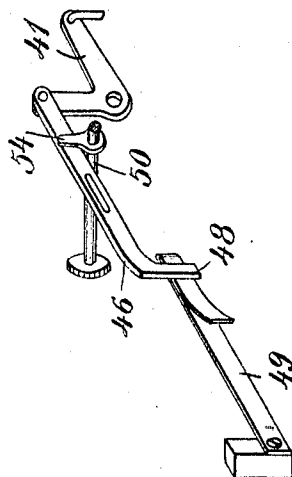


Fig. 4,



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JESSE ALEXANDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO EDWARD J. GALLAGHER, OF PITTSBURGH, PENNSYLVANIA.

TYPE-WRITING-MACHINE RIBBON OPERATING AND FEEDING MECHANISM.

1,048,267.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed June 8, 1912. Serial No. 702,392.

To all whom it may concern:

Be it known that I, JESSE ALEXANDER, a citizen of the United States of America, and residing at New York, in the county of Kings and State of New York, have invented new and useful Improvements in Type-Writing-Machine Ribbon Operating and Feeding Mechanism, of which the following is a specification.

10 My invention relates particularly to mechanism for use in the so called front stroke or visible writing machine type.

The object is to provide a simple and reliable construction for feeding the ribbon step by step, reversing the direction of feed when desired and vibrating the ribbon in front of the printing point at each printing stroke.

Figure 1, is a longitudinal section and side elevation illustrating mechanism embodying my invention and showing the ribbon oscillating or vibrating mechanism. Fig. 2, is a plan view and partial section illustrating my invention. Fig. 3, is a longitudinal section and side elevation showing the ribbon feeding mechanism. Fig. 4, is a perspective view showing part of the ribbon feeding mechanism.

The key and type bar action herein illustrated, is claimed in an accompanying application but will be briefly described. The key lever 1 is pivoted at 2 and guided by the comb 3. The type bar 4 is pivoted at 5 in the type bar segment 6 and its head is adapted to rest on the ledge 7. The sub-lever 8 pivoted at 9 is connected to the key lever by a spring 10 and a link 11, the latter having a pin and slot connection 12 and a sliding connection at 13 with the key lever. The link 14 is connected at 15 to the sub-lever and has a slot 16 for the pin 17 on the type bar and an end 18 for engaging the shoulder 19 of the type bar at the beginning of the stroke. The escapement rocker 27 is pivoted at 28 and normally under tension of the adjustable spring 29. The universal bar 30 beneath the key lever is connected by the link 31 to the rocker arm 32. The lever 33 is connected at 34 to the arm 32 and at 35 to the lower end of the ribbon vibrating guide 36. A toothed rack 37 carried by the carriage construction is preferably pivoted and adapted to be retracted by a finger-lever 38.

55 The ribbon 39 is carried by two spools in

front of the platen 40 and guided by the vibrator 36. Whenever a key lever is depressed the universal bar 30 is depressed, the arm 32 drawn down, the lever 33 tilted and the vibrator 36 raised with the ribbon in front of the printing position just before the type bar reaches the printing point. On opposite sides of the machine are levers such as 41 connected by links 42 to the universal bar 30. Each ribbon spool 43 is mounted on a shaft 44 having a ratchet 45 at its lower end. A pawl 46 guided by a pin 47 is connected to the vertical arm of the lever 41 and has its forward end 48 adapted to engage the ratchet 45 when moving forwardly so as to feed the ratchet and ribbon. A spring pawl 49 has one end located adjacent the end 48 of the feeding pawl 46 and is adapted to hold the ratchet 45 from backward movement. The rod 50 extending transversely of the machine in back of the type bar segment is held in its position by a spring 51 in a notch 52. The rod 50 has another notch 53 into which the spring 51 is adapted to snap when the rod 50 is pushed to the left. The rod 50 has two arms 54 and 55 which project upwardly along the sides of the corresponding feeding pawls so that when the rod is in the position shown in Fig. 2 the right hand feeding pawl is held out of engagement with the corresponding ratchet while the left hand feeding pawl is in operative engagement with its ratchet. By shifting the rod 50 to the left, the right hand feeding pawl and brake pawl are allowed to come into operative engagement with its ratchet while the left hand feeding pawl and brake are forced out of engagement with the left hand ratchet. The direction of feed of the ribbon is therefore reversed.

What I claim is:—

1. In a typewriter ribbon mechanism, a universal bar extending beneath the key levers, a vibrating ribbon guide operatively connected with said universal bar and levers pivoted at the sides of the machine operatively connected with said universal bar, ribbon feeding ratchets and pawls connected to said levers for operating said ratchets.

2. In a typewriter ribbon mechanism, a universal bar extending beneath the key levers, levers pivoted to the sides of the machine and having links connected to said

universal bar, ribbon ratchets on opposite sides of the machine and yielding pawls directly connected with said side levers for operating said ratchets.

5 3. In a typewriter ribbon mechanism, a universal bar extending beneath the key levers, levers pivoted to the sides of the machine and having links connected to said universal bar, ribbon ratchets on opposite
10 sides of the machine, yielding pawls directly connected with said side levers for operating said ratchets and a reversing rod having arms projecting along side the said
15 pawls.

4. A typewriter ribbon mechanism, comprising a vertical ribbon spool shaft, a ratchet carried thereby, a spring brake
20 pawl secured at a point in front of said ratchet and extending along the outer side thereof and a yielding feeding pawl extending rearwardly of said ratchet and movable in a horizontal plane at the side of
25 the machine and universal bar operated means for oscillating said feeding pawl.

5. A typewriter ribbon mechanism, comprising vertical ribbon spool shafts, a ratchet carried thereby, a spring brake pawl

secured at a point in front of said ratchet and extending along the outer side thereof and a yielding feeding pawl extending rearwardly of said ratchet and movable in a horizontal plane at the side of the machine and universal bar operated means for oscillating said pawl, said brake pawl having one end extending along side of the end of
30 said feeding pawl and a reversing rod for moving said feeding pawl laterally away from its ratchet together with the corresponding brake pawl.

6. In a typewriter ribbon mechanism, a feeding ratchet mounted on a vertical axis, a lever pivoted at the side of the machine and having a vertical arm and a horizontal arm, a pawl connected at its rear end to a vertical arm of said lever and having a guide adjacent its forward end, a universal
40 bar extending beneath the key levers and a link connecting the end of said universal bar to the horizontal arm of said first mentioned lever.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."