Jan. 8, 1957 J. SEGUI 2,776,738

COLLAPSIBLE-ARM AND LOCKING MECHANISM FOR SHORTHAND TYPEWRITERS AND LIKE MACHINES

Filed Dec. 16, 1953 3 Sheets-Sheet 1

Fig. 1.

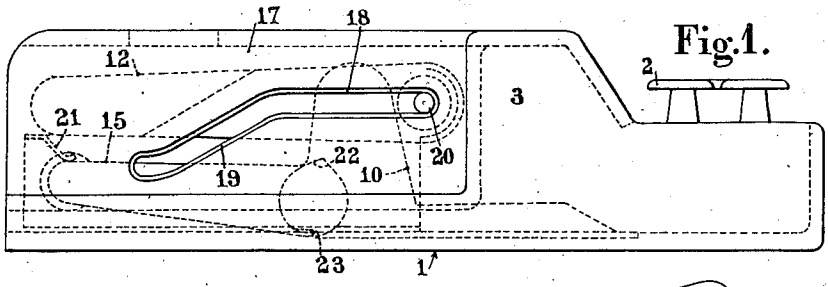


Fig. 2.

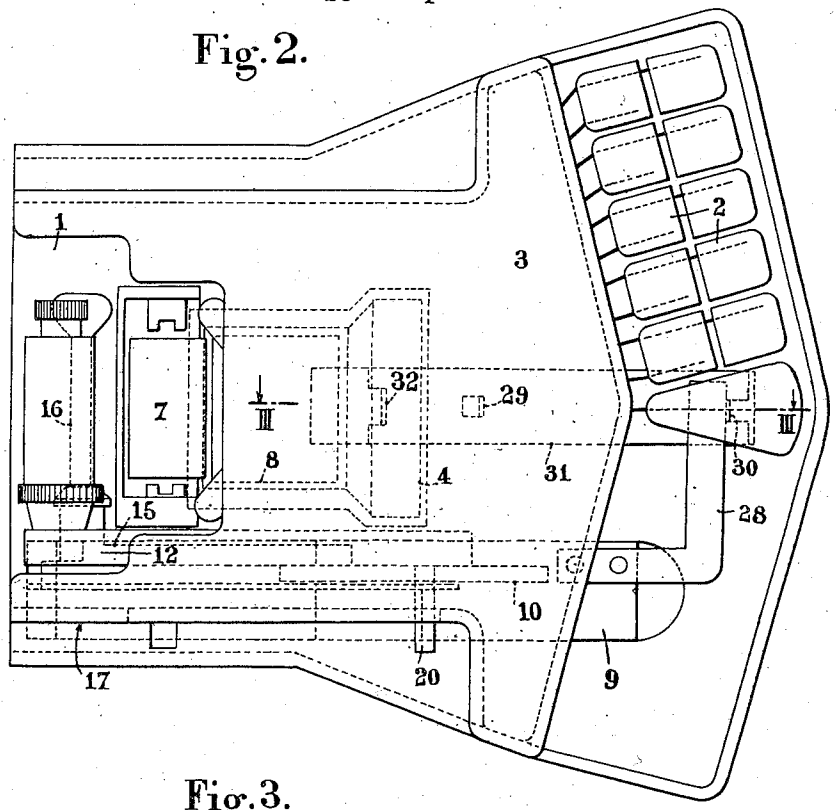
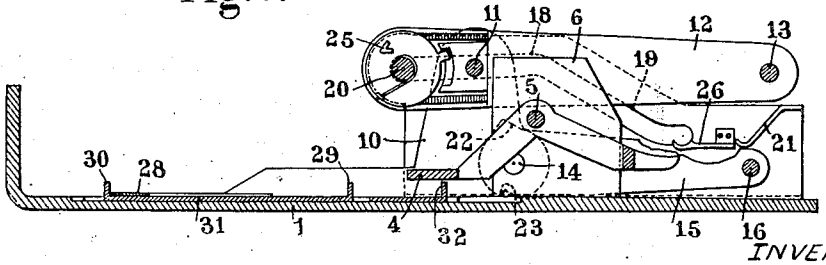


Fig. 3.



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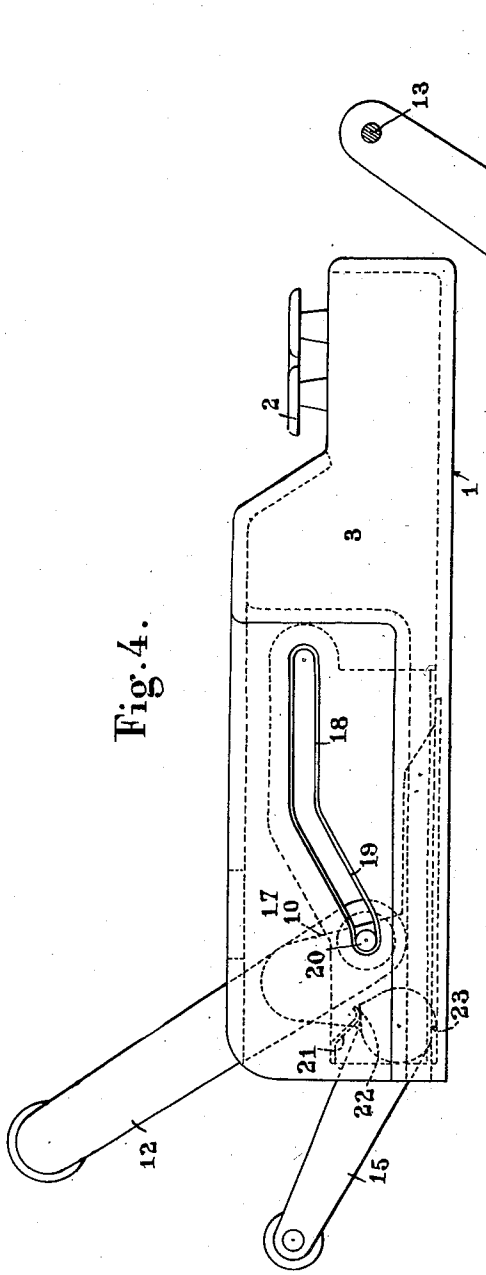


Fig. 4.

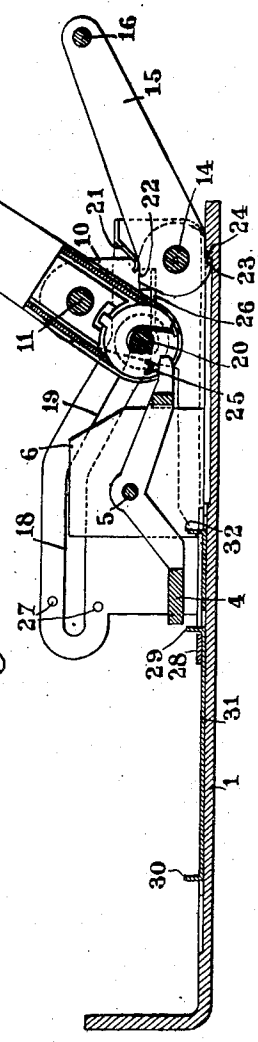


Fig. 6.

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Filed Dec. 16, 1953 3 Sheets-Sheet 3

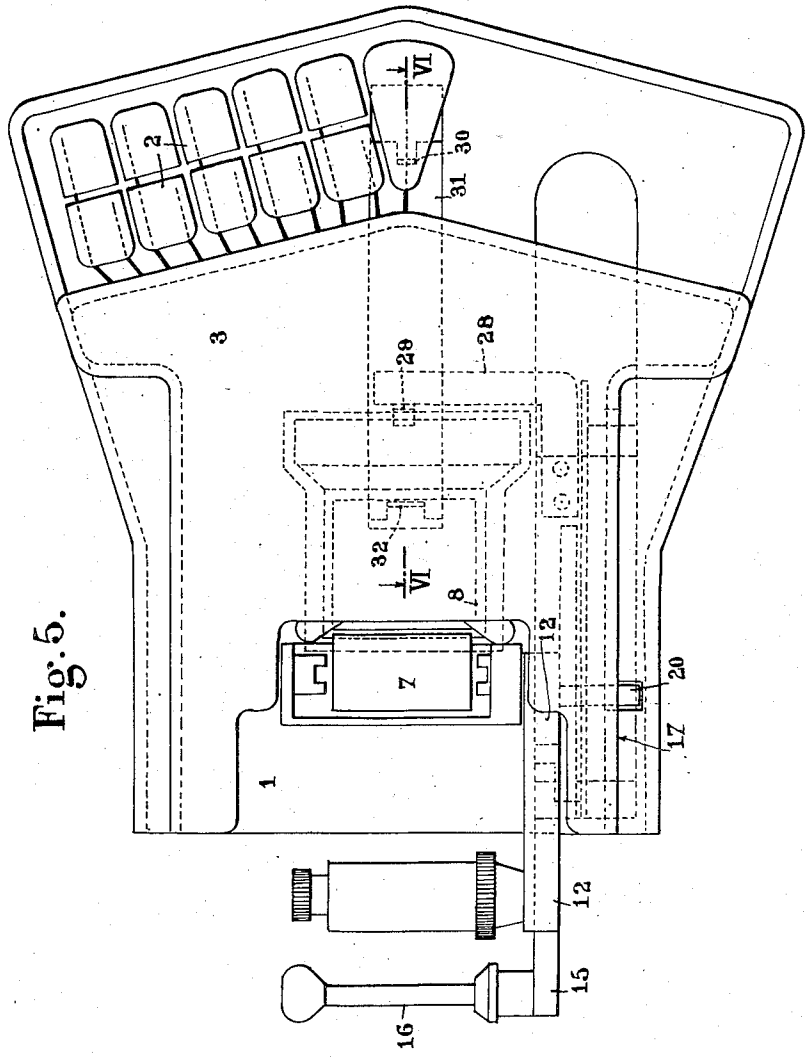


Fig. 5.

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COLLAPSIBLE-ARM AND LOCKING MECHANISM FOR SHORTHAND TYPEWRITERS AND LIKE MACHINES

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Application December 16, 1953, Serial No. 398,606

Claims priority, application France August 3, 1953

4 Claims. (Cl. 197—9)

This invention relates to a collapsible-arm and locking mechanism, notably for shorthand typewriters and like machines, characterized in that it comprises a movable assembly having two arms, each arm being adapted to receive on its free end the spool for winding on and winding off respectively the paper tape, when the arm is in its operative condition, said movable assembly being adapted to collapse to its inoperative position so as to be concealed completely by the outer casing of the machine, without any of its component elements projecting from the volume bounded by this casing.

Moreover, this mechanism is characterized in that a member controlled from the aforesaid movable assembly is adapted to lock against motion the universal bar or any other member positively driven at each touch, and therefore all the type-carrying bars and levers, as long as said movable assembly is not moved to its operative position.

To this end, according to this invention, the movable assembly consists of a horizontal slide adapted to move along a slideway provided for this purpose in the base of the machine, a vertical plate fast with said slideway and comprising pins having pivotally mounted thereon two arms adapted to carry on their free ends the spools for winding and unwinding the paper tape respectively, and cam members adapted to cause said arms to be rotated about said pins for moving them from their inoperative positions to their operative positions, respectively, when said movable assembly is moved from one to the other of said positions.

This movable assembly is also provided with a stud rigid therewith which controls the travel of a slide adapted to lock against motion or release the universal bar or like member according to its position, a spring or other retaining member or device preventing said slide from moving unexpectedly.

The attached drawings forming part of this specification show by way of example one form of embodiment of the invention. In the drawings:

Fig. 1 is a lateral view of the machine.

Fig. 2 is a plan view thereof.

Fig. 3 is a vertical sectional view taken upon the line III—III of Fig. 2.

Fig. 4 is a view similar to Fig. 1 showing the movable assembly of the invention in its operative position.

Fig. 5 is a view similar to Fig. 2 also showing the movable assembly in its operative position; and

Fig. 6 is a sectional view taken upon the line VI—VI of Fig. 5.

The machine shown by way of example is a shorthand typewriter comprising a base 1, a keyboard 2, an outer protection casing 3 and a universal bar 4 fulcrumed about a pin 5 mounted in the plate 6, an impression roller 7 and a box-like member 8 containing an inking ribbon.

The moveable assembly consists of a horizontal slide 9 adapted to slide longitudinally in the base 1; on this slide there is secured a vertical plate 10 carrying a pair of pins 11 and 14; the pin 11 has fulcrumed thereon an

arm 12 carrying at its free end the spindle 13 of the winding spool, and the other pin 14 has pivotally mounted thereon another arm 15 carrying at its free end the spindle 16 of the unwinding spool.

In the vertical lateral wall 17 of the outer casing of the machine there is formed a slot having a front rectilinear horizontal portion 18, level with the fulcrum pin 11 of arm 12 carrying the winding spool, and a rear downwardly-inclined portion 19.

A stud 20, rigid with arm 12, extends through this slot and projects laterally from the machine casing so as to constitute the handle controlling the movable assembly of the machine.

As will be seen in Fig. 3 of the drawings, when this stud 20 is pushed home to the front end of the slot, it is level with the fulcrum pin 11, as already pointed out, and therefore the arm 12 fulcrumed thereon will be positioned horizontally without projecting from the volume bounded by the machine casing.

When this control stud 20 is pushed away from the keyboard of the machine it is firstly moved horizontally and so as to cause the complete movable assembly to travel bodily therewith; as long as this pin travels along the horizontal portion 18 of the slot the arm 12 will not rotate; however, when the stud 20 engages the inclined portion 19 of this slot the front end of arm 12 will be tilted therewith downwardly and the spindle 13 of the winding spool will be raised and be finally positioned as shown in Figs. 4, 5 and 6.

Considering now the other arm 15, of which the free end is adapted to carry the winding-off spool, its upper edge engages a leaf spring 21 the front portion of which is slightly rounded; this upper edge comprises at the front a rectilinear portion whereby the arm 15 will remain horizontal during the first portion of the slide travel, this rectilinear portion being followed by a cam-shaped portion 22 positioned inward of the fulcrum 14, so that when the leaf spring 21 engages this cam-shaped portion 22 it causes the arm 15 to rotate about its axis until it is positioned as shown in Figs. 4 and 6. A stud 23 engaging a shoulder or other stop 24 formed or secured on the base 1 limits the upward movement of the arm 15, and a lateral projection 25 rigid with the arm 12 engages the universal bar 4 to limit the pivotal upward movement thereof.

The moveable assembly is locked in its two extreme positions, that is to say, in its operative position by a resilient or spring arm 26 engaging the control stud 20, and in its inoperative position, by a pair of small stops 27 positioned on either side of the front end of the slot in which the stud 20 is guided and adapted to lock this stud 20 in inoperative position at the relevant end of the horizontal portion 18 of this slot.

The horizontal slide 9 is fast with an angle member 28 adapted to engage a pair of stops 29, 30 provided on the slide 31 travelling in the base 1; this slide 31 is provided with a projection 32 positioned beneath the universal bar 4 to prevent the latter from rotating about its axis 5 when the movable assembly is in its inoperative position, as shown in Figs. 1 to 3, and the angle member 28, by engaging the stop 30 of slide 31, has caused the latter to move towards the keyboard of the machine.

When the control stud 20 is actuated for transferring the movable assembly to its operative position, the angle member 28 will first slide without moving the slide member 31 and the latter will be carried along only after it has engaged the stop 29; the position of this stop is so calculated that the slide 31 will commence its travel only when the movable assembly 9 is ready to be moved to its operative position and on the other hand the stop 32 will release the universal bar 4 only at the proper time.

It is obvious that the form of embodiment described hereinabove constitutes but one example of the manner in which the invention may be carried out in the practice, since many modifications may be brought thereto without departing from the spirit and scope of the invention. Moreover, the braking device for preventing the universal bar locking member from moving unexpectedly, and the correction bracket normally provided on the arm **12** have not been shown in order to simplify the drawings.

What I claim is:

1. A shorthand typewriter having a frame structure and an outer casing, comprising a movable assembly adapted to slide on said frame structure from an inoperative position to an operative position and vice-versa, said movable assembly comprising a pair of pivotally mounted arms carrying at their free ends spindles adapted to receive in their operative positions a paper-tape winding spool and a paper-tape unwinding spool, respectively, and means fixing said arms in their operative positions, in which they project from said outer casing, when said assembly is slid to said operative position, said means being also adapted to cause said movable assembly to collapse to its inoperative position so that none of the components of said movable assembly will project from the volume bounded by said outer casing.

2. A shorthand typewriter having a base, an outer casing, a slideway in said base, a slide movable in said slideway, a plate rigid with said slide, a pair of pins projecting horizontally from said plate, a pair of arms fulcrumed on said pins respectively said slide, plate, pins

and arms forming a movable assembly able to slide from an inoperative to an operative position and vice-versa, and said arms being adapted to receive on their free ends in their operative positions, the paper-tape winding spool and the paper-tape unwinding spool of the machine, respectively, and cam members adapted on the one hand to cause the raising pivotal movement of said arms as said movable assembly is slid to its operative position, and on the other hand to collapse these arms when said assembly is slid to its inoperative position, without any component of said movable assembly projecting from the volume bounded by said outer casing.

3. A machine according to claim 1 comprising a member such as a universal bar positively driven at each touch, and an element rigid with said movable assembly for locking said member against motion when said movable assembly is in its inoperative position.

4. A machine according to claim 1 comprising a member such as a universal bar positively driven at each touch, an element adapted to lock said member against motion and means rigid with said movable assembly for moving said element to its locking position when said movable assembly is in its inoperative position and releasing said element only when said movable assembly is about to reach its operative position.

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