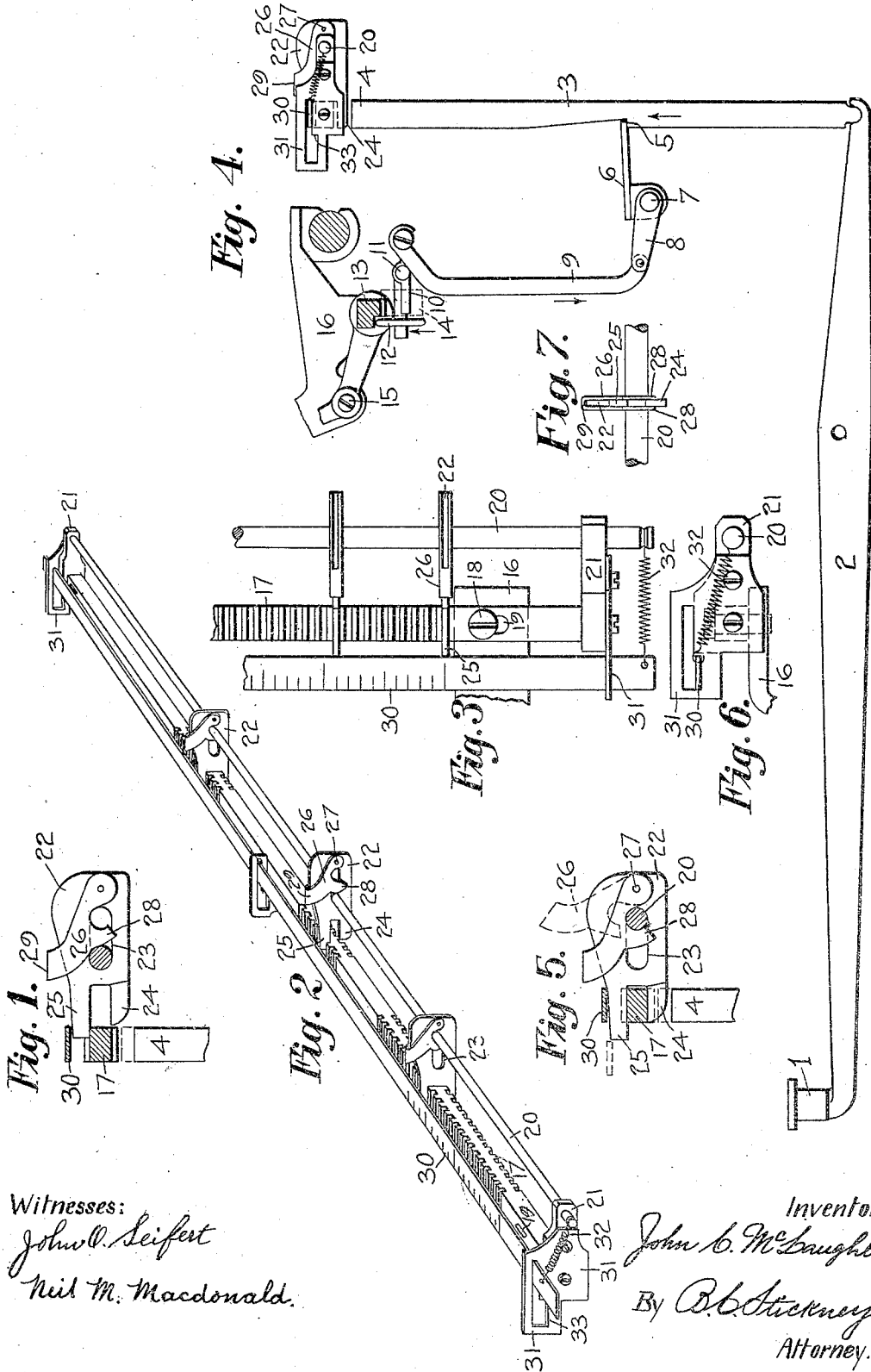


J. C. McLAUGHLIN.
TYPE WRITING MACHINE.
APPLICATION FILED MAY 22, 1909.

958,817.

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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN C. McLAUGHLIN, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to tabulating mechanisms for typewriting and other machines, and particularly to column stops.

One of the principal objects of this invention is to provide simple, inexpensive and convenient means for enabling the machine to be set for different kinds of tabulating work at will, without the necessity of readjusting the column stops to different points along the carriage or rack.

In carrying out the invention, there is provided a series of column stops, each of which is movable into and out of effective position without liability of displacement along the carriage or rack. Each column stop is in the form of a thin plate, to permit these stops to be set closely to one another; and they are independently adjustable along a rack. Each is suitably supported for a forward and backward sliding movement in the notch of the rack, to move into and out of effective position; and a latch is provided to lock the stop in each of said positions.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a sectional side elevation, showing a column stop locked out of effective position. Fig. 2 is a rear perspective view of my improved device. Fig. 3 is a fragmentary plan, showing the keeper bar adjusted to release the column stops. Fig. 4 is a diagrammatic sectional side elevation of the tabulating mechanism, including a denomination stop key and carriage-releasing devices. Fig. 5 is a view similar to Fig. 1, but showing the column stop locked in effective position on the rack; and also showing, in dotted lines, the manner of unlocking the stop. Fig. 6 is an end elevation of the device. Fig. 7 is a front view of the stop.

Denomination keys 1, mounted upon levers 2, are depressed to lift rods 3, formed with denomination stops 4 at their upper ends. Each denomination stop rod 3 is formed with a shoulder 5 to engage a uni-

versal arm 6, which projects backward from a rock shaft 7. The latter carries an arm 8, connected by a link 9 with a lever 10 pivoted at 11 upon the framework of the machine; said lever carrying a roller 12 which lifts a rack 13 out of mesh with an escapement pinion 14; said rack 13 pivoted at 15 upon the usual carriage 16. A bar 17, having rack teeth or notches at letter space intervals upon its upper and lower edges, extends along the rear of and is secured to the carriage 16.

A rod 20 supported in brackets 21 secured to the rack 17 extends along the rear of the latter. Column stops 22 are mounted upon said rod, each stop provided with a slot 23 to engage the rod for forward and backward adjustment. The stops are forked to engage rack 17, the lower prong 24 constituting the stop proper, and the other prong 25 being longer, so that it may remain in engagement with the rack when the lower prong 24 is withdrawn from effective position. A latch or lock 26 is pivoted at 27 to each stop 22; each latch being preferably folded over the stop. The latch is provided with hooks 28 to catch over the rod 20, to lock it in effective position, Fig. 5, or to engage back of the rod to lock the stop out of effective position, Fig. 1. The bent portion 29 serves as a finger piece. A keeper bar 30, supported for backward and forward movement in brackets 31 secured to the rack 17, normally extends along the rack over the stops, and engages the longer prong 25 to retain it out of effective position. Springs 32 normally retain the keeper bar in this position. Jogs 33 are provided in the brackets 31 to be engaged by the keeper bar, to retain it in its rearmost position against the tension of the springs 32; so that the stops 22 may be freely adjusted to different positions along the rack. The keeper bar may be graduated, as shown.

Having thus described my invention, I claim:

1. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod and shaped to engage the rack, said stop slidable transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means for holding said column stop either in or out of working position while held by said rack.

2. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod to engage the rack, said
5 stop slidable edgewise transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means to latch said stop in engagement with the rack.

3. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod to engage the rack, said
10 stop slidable edgewise transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means to latch said stop both in and out of working position while held by the rack.

4. In a typewriting and tabulating mechanism, the combination with a rack and a rod extending along the rack, of a column stop shaped to engage the rack and slotted to engage the rod, said stop movable transversely on the rod to disengage itself from the rack, and also slidable along the rod,
20 and a latch pivoted to the stop and provided with a hook portion to engage the rod to lock the stop into and out of engagement with the rack.

5. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, and a column stop formed to engage said rod for transverse and lengthwise movement thereon, and having a portion to engage the rack, and means for detaining said
30 stop in either effective or ineffective position while held by said rack.

6. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop formed to engage said
40 rod for transverse and lengthwise movement thereon, and having a portion to engage the rack, and adjustable means to lock the stop against transverse movement on the rod.

7. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop formed to engage said rod for transverse and lengthwise movement thereon, and having a portion to engage the rack, and a latch pivoted to the stop to engage the rod to lock the stop either in or
50 out of engagement with the rack.

8. The combination with a bar having rack teeth cut on its opposite sides, of a member adjustable along the rack and
55 forked to engage said rack teeth, one part of the fork constituting a column stop and the other part being longer, and said member being movable to withdraw the stop from effective position without disengaging the other part of the fork from the rack, and means to detain the stop both in and out of effective position.

9. The combination with a bar having rack teeth cut on its opposite sides, of a
65 member adjustable along the rack and

forked to engage said rack teeth, one part of the fork constituting a column stop and the other part being longer, and said member being movable to withdraw the stop from effective position without disengaging the other part of the fork from the rack, means to detain the stop both in and out of effective position, said detaining means comprising a latch pivoted on said member, and a device engageable by said latch.

10. The combination with a bar having rack teeth cut on its opposite sides, of a member adjustable along the rack and forked to engage said rack teeth, one part of the fork constituting a column stop and the other part being longer, and said member being movable to withdraw the stop from effective position without disengaging the other part of the fork from the rack, and means to detain the stop both in and out of effective position, a keeper bar extending along said rack to hold said members in ineffective positions, said bar releasable to permit adjustment of said members along the rack.

11. The combination with a bar having rack teeth cut on its opposite sides, of a member adjustable along the rack and forked to engage said rack teeth, one part of the fork constituting a column stop and the other part being longer, and said member being movable to withdraw the stop from effective position without disengaging the other part of the fork from the rack, means to detain the stop both in and out of effective position, a keeper bar extending along said rack to hold said members in ineffective positions, said bar releasable to permit adjustment of said members along the rack, and means to detain said bar in ineffective position.

12. In a tabulating mechanism, the combination of a rack, a rod parallel with said rack, column stops to engage the rack and mounted on the rod and adjustable along the same and movable transversely thereon, latches attached to said stops to engage the rod to lock the stops either in or out of effective position, and a keeper bar extending along the rack above the stops, said keeper bar movable to release the stops for adjustment along the rack.

13. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, column stops on the rod to engage the rack, and movable on the rod to ineffective position, a keeper bar for said stops extending along the rack above the same, said bar supported for backward and forward movement in brackets secured to the rack, springs tensioned to retain the bar in effective position, and means to hold the bar out of use.

14. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, column stops on the rod to engage the

rack, and movable on the rod to ineffective position, a keeper bar for said stops extending along the rack above the same, said bar supported for backward and forward movement in brackets secured to the rack, and springs tensioned to retain the bar in effective position, said brackets provided with jogs engaged by the bar to lock it away from the stops to permit adjustment thereof along the rack.

15. In a typewriting and tabulating mechanism, the combination with a carriage and carriage feeding devices, of a rack notched at letter space intervals secured to the rear of the carriage, a rod extending along the rear of the rack, a series of column stops adjustable along said rod, each stop slotted to engage said rod and movable transversely thereof, and also provided with a fork por-

tion to engage the rack, a latch pivoted to the stop to catch over the rod to lock the stop either in or out of operative engagement with the rack, the upper prong of the fork being longer than the lower prong to remain in engagement with the rack when the lower prong is withdrawn, a keeper-bar extending along the rack over the stops and mounted in brackets for forward and backward movement, and springs tensioned to hold said bar over the stops to retain the latter in engagement with the rack when in inoperative positions, jogs being provided in the brackets to lock the bar in its ineffective position.

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