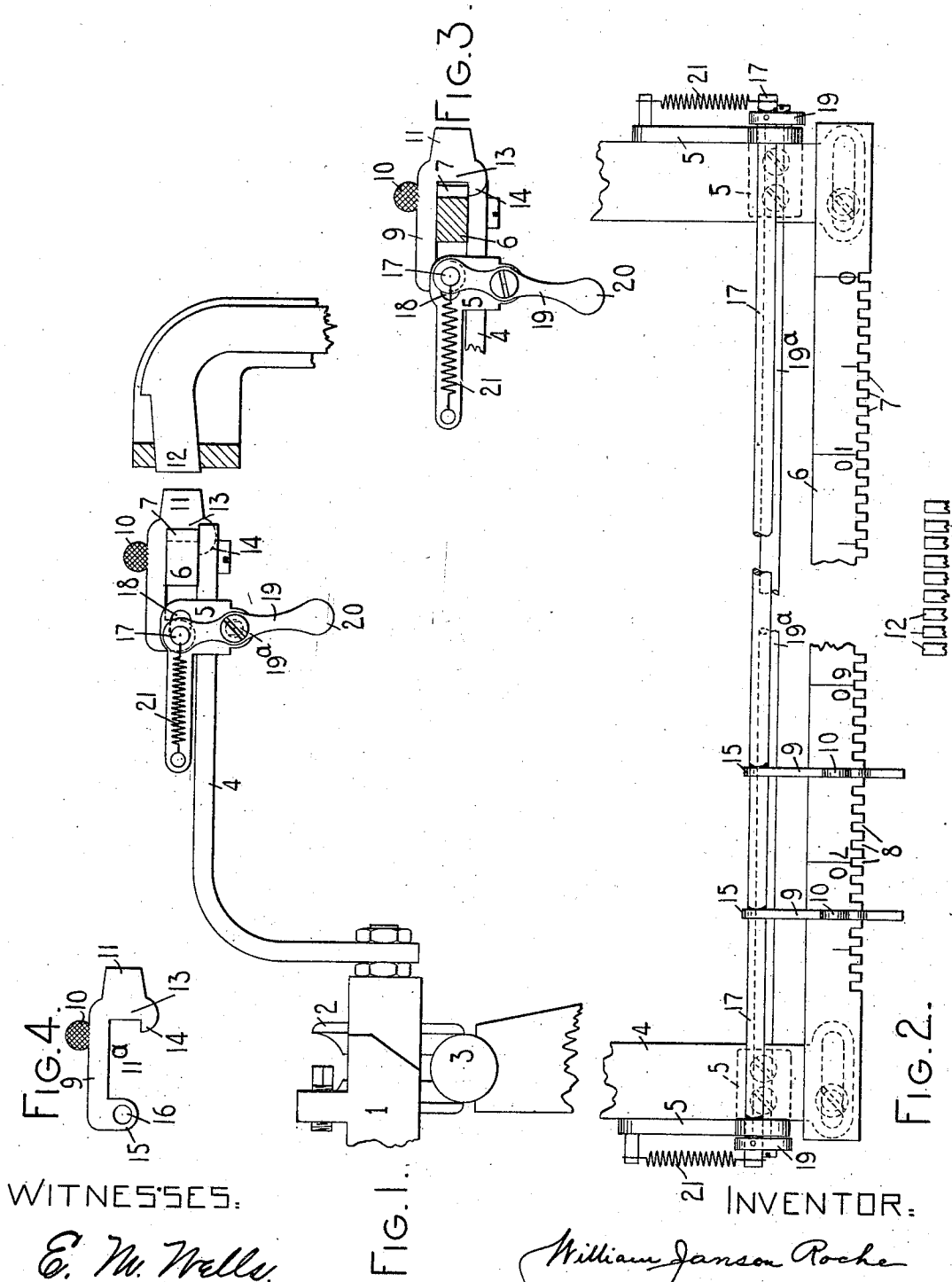


W. J. ROCHE.  
TYPE WRITING MACHINE.  
APPLICATION FILED DEC. 30, 1907.

975,075.

Patented Nov. 8, 1910.



WITNESSES.

E. M. Wells.  
Charles Smith

FIG. 1.

INVENTOR.  
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# UNITED STATES PATENT OFFICE.

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YORK.

## TYPE-WRITING MACHINE.

975,075.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed December 30, 1907. Serial No. 408,577.

*To all whom it may concern:*

Be it known that I, WILLIAM JANSON ROCHE, citizen of the United States, and resident of New Bethlehem, in the county of Clarion and State of Pennsylvania, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to tabulating mechanism.

One of the objects of my invention is to provide simple and efficient means for preventing the removal and possible loss of the tabulator or column stops from the machine, and yet to provide means whereby the stops may be readily adjusted.

A further object of my invention is to provide simple and efficient means whereby a plurality of column stops may be simultaneously thrown into and out of engagement with the means which retains them in adjusted position.

To the above and other ends which will hereinafter appear, my invention consists in the features of construction, arrangements of parts and combinations of devices to be hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings in which like reference characters indicate corresponding parts in the different views, Figure 1 is an enlarged detail fragmentary side view showing a portion of a typewriting machine embodying my invention. Fig. 2 is an enlarged detail fragmentary plan view showing some of the parts illustrated in Fig. 1. Fig. 3 is an operating view corresponding to Fig. 1 but showing a different relation of the parts. Fig. 4 is an enlarged detail side view of one of the column stops.

I have applied my invention in the present instance to a Remington typewriting machine equipped with a Gorin tabulator, so much only of said machine and tabulator being shown as is necessary to an understanding of my invention. It should be understood, however, that the invention may be embodied in various styles of typewriting machines.

The truck 1 of the carriage is of the usual construction employed in the Remington machine, and is provided with rollers 2

which bear on a guide rod 3 to support and guide the carriage in its movement from side to side of the machine. Rearwardly extending brackets 4 are secured to the truck and each bracket has secured thereto at its rear end a bearing or supporting piece 5 and also supports one end of a column stop bar 6. This bar is provided with teeth 7 on one side only thereof (on the rear side, as shown in the present instance) and with interidental spaces 8, adjacent spaces being situated a letter space distance apart.

A plurality of column stops 9 (one of which is shown in detail in Fig. 4) are received in the spaces 8 of the column stop bar to lock the stops against movement thereon in the direction of the travel of the carriage. It will be observed that each of the stops is formed of a single piece of sheet metal with a finger-piece 10 and an engaging or stop projection 11, the latter being employed for coöperation, as shown in the present instance, with denominational stops 12 of a Gorin tabulator. Each stop has an opening 11<sup>a</sup> in order that the stop may straddle the stop bar 6. The length of the opening 11<sup>a</sup> is greater than the width of the stop bar so as to afford a movement of each stop fore and aft of the machine on the stop bar in order that the hook-like ends 13 of the stops may be moved into and out of the spaces 8 in the stop bar to throw the stops into and out of engagement with the bar. The hook-like member of each stop has a bill or in-turned projection 14 which engages under the stop bar when the stop is in the engaged position to prevent the stop from moving upwardly in the space 8 in which it is seated. Each of the stops 9 has a downwardly projecting portion 15 perforated at 16 for the free passage therethrough of a rod or bar 17 which extends in the direction of the travel of the carriage parallel to the stop bar 6. This rod 17 passes near its ends through bearing slots 18 formed in the supports 5 so that the rod may receive a limited bodily movement in a direction transverse to the direction of the travel of the carriage. Levers 19 are pivotally supported on the members 5, one arm of each lever coöperating with the rod 17, and the other being formed with a finger-piece 20 by which the levers may be turned on their pivots. A rod

or rock shaft 19<sup>a</sup> extends from one lever to the other and is seated in bearing openings in the supports 5 to form a pivot for the levers and to connect them to move together.

5 As here shown, the levers 19 are rigidly mounted on the ends of the rock shaft 19<sup>a</sup>, and the rod or bar 17 passes through openings in the upper ends of said levers, being secured to said levers in any suitable way, as  
10 by pins. It will be understood that an actuation of either of the finger-pieces 20 is effective to move both of the levers and to effect a bodily movement of the rod 17. This movement of the rod 17 will effect a  
15 simultaneous movement of all of the column stops to move them out of engagement with the rack or column stop bar 6 in order that said stops may be adjusted longitudinally of the rod 17 to the desired position on the rack  
20 bar. Springs 21 coöperate with the levers 19 to normally maintain the rod 17 in the position shown in Fig. 1, and thereby normally maintain the stops in engagement with the rack bar. The pressure of these springs  
25 is overcome by an operation of either of the finger pieces 20.

In the present instance the rod 17 is shown as a pivot rod on which the column stops may be turned as well as to receive a move-  
30 ment along the rod though from certain aspects of my invention this is not essential as the stops may merely be mounted for movement longitudinally on the rod 17.

From the foregoing description it will be  
35 seen that I have provided simple and efficient means for preventing the column stops from being removed from the machine and possibly misplaced or lost and that the stops may nevertheless be readily adjusted when de-  
40 sired and rigidly held in their adjusted positions. It will also be seen that each stop is composed of but a single piece of sheet metal and that the single bar or rod 17 is effective  
45 to move all of the stops into or out of engagement with the stop rack and to hold them in such engagement. If there be any stops which are not in use they may be moved along the rod 17 and the column stop  
50 bar to one end thereof or the unused stops may be turned forward on the rod 17 as a pivot to an inoperative position where they cannot be engaged by the denominational stops.

Various changes may be made without departing from the spirit and scope of my invention.

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

60 1. In a typewriting machine and tabulating mechanism, the combination of a tabulating stop, a pivot that extends in the direction of the travel of the carriage and on which said tabulating stop is mounted to turn and to move longitudinally, means  
65 for securing the stop in its adjusted position,

and means for moving said rod with relation to said securing means to secure or to loosen said stop.

2. In a typewriting machine and tabulating mechanism, the combination of a tabulating stop, a rod that extends in the direction of the travel of the carriage and along which said tabulating stop is adapted to move, a rack which is engaged by said stop, and means for moving said rod with relation  
70 to said rack to secure or loosen said stop. 75

3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a tabulating stop, a rod that extends in the direction of the travel of the carriage  
80 and on which said tabulating stop is mounted and along which the stop is adapted to be adjusted, a coöperative tabulating stop adapted to be moved into coöperation with said first mentioned stop to effect an arrest  
85 of the carriage, means for securing the first mentioned stop in its adjusted position, and means for moving said rod in a direction transverse to the travel of the carriage.

4. In a typewriting machine and tabulating mechanism, the combination of a tabulating stop, a rod that extends in the direction of the travel of the carriage and along which said tabulating stop is adapted to move, means for securing the stop in its ad-  
90 justed position, means whereby a movement of said rod may be effected independently of the tabulating operation and in a direction transverse to the travel of the carriage, and a spring for holding the rod in normal  
95 position. 100

5. In a typewriting machine and tabulating mechanism, the combination of a tabulating stop, a rod that extends in the direction of the travel of the carriage and on which said tabulating stop is mounted to move longitudinally, means for securing the stop in its adjusted position, means whereby  
105 a movement of said rod may be effected independently of tabulating operation and in a direction transverse to the travel of the carriage, a spring for holding the rod in normal position, and hand actuated means operable at will to move said rod against the  
110 pressure of its spring. 115

6. In a typewriting machine and tabulating mechanism, the combination of a carriage, a tabulating stop, a laterally and bodily movable rod that is carried by the carriage and extends in the direction of the travel of the carriage and on which said  
120 tabulating stop is mounted to move longitudinally, a rack which is engaged by said stop, a spring for maintaining the stop in engagement with said rack, and a coöperative stop adapted to be moved into the path of said first mentioned stop. 125

7. In a typewriting machine and tabulating mechanism, the combination of a tabulating stop, a rod that extends in the direc-  
130

tion of the travel of the carriage and on which said tabulating stop is mounted to move longitudinally, a rack which is engaged by said stop, and means for moving said rod to disengage the stop from the rack.

8. In a typewriting machine and tabulating mechanism, the combination of a column stop bar, a column stop adapted to engage and disengage said bar, a parallel auxiliary supporting bar upon which said stop is pivotally mounted, said stop being open or cutaway on one side so that it may be swung to a wholly inoperative position, and a cooperating stop adapted to work in conjunction with said pivoted stop when the latter is engaged with said stop bar in operative position.

9. In a typewriting machine and tabulating mechanism, the combination of a tabulator rack bar, a series of tabulator stops provided with rack engaging portions and with openings or cutaways on one side, a parallel auxiliary bar movable toward and from said rack bar and upon which are pivotally supported said series of tabulator stops, means for reciprocating said auxiliary bar for the purpose of simultaneously engaging said series of stops with said rack bar and for simultaneously disengaging them therefrom, the said openings or cutaways in the stops enabling the operator to throw out of use one or more of said stops without interfering with the capability of the auxiliary stop supporting bar to operate simultaneously upon all of the remaining stops in use, and a cooperating stop or stops adapted to work in conjunction with the stops set for use.

10. In a typewriting machine and tabulating mechanism, the combination of a bar having rack teeth on the rear side thereof, a series of column stops having rack engaging portions, openings or cutaways, and downwardly projecting perforated portions forward of said rack bar, a supplemental actuating bar passing through all of said perforations, a hand piece for moving said bar to and from the rack bar and carrying therewith the said stops, a spring for returning said to and fro moving bar, and a cooperating set of denominational stops.

11. In a typewriting machine and tabulating mechanism, the combination of a rod which extends in the direction of the travel of the carriage and which is movable bodily in a direction transverse to such travel, a plurality of tabulator stops mounted on said rod and adjustable along it, means for engaging said stops to hold them in their adjusted positions, and a cooperating stop movable into cooperation with said first mentioned stops to arrest the carriage.

12. In a typewriting machine and tabulating mechanism, the combination of a rod which extends in the direction of the travel

of the carriage and which is movable bodily in a direction transverse to such travel, a plurality of tabulator stops carried by said rod and adjustable along it, a rack which is adapted to be engaged by said stops to hold them in their adjusted positions, and a cooperating stop movable into cooperation with said first mentioned stops to arrest the carriage.

13. In a typewriting machine and tabulating mechanism, the combination of a rod which extends in the direction of the travel of the carriage and which is movable in a direction transverse to such travel, a plurality of tabulator stops carried by said rod and adjustable along it, a rack which is adapted to be engaged by said stops to hold them in their adjusted positions, and hand controlled means for effecting a transverse movement of said rod to simultaneously engage all of said stops with or to simultaneously disengage all of said stops from said rack.

14. In a typewriting machine and tabulating mechanism, the combination of a rod, swinging actuating devices to which said rod is connected, a plurality of column stops strung on said rod for adjustment along the rod, means for engaging said stops to hold them in the positions to which they are adjusted along said rod, and means for swinging said actuating devices for simultaneously moving the stops into or out of engagement with said engaging means.

15. In a typewriting machine and tabulating mechanism, the combination of a rod, swinging actuating devices on which said rod is mounted, a plurality of column stops strung on said rod for adjustment along the rod, said rod constituting means for preventing a removal of the stops from the machine, means for engaging said stops to hold them in the positions to which they are adjusted along said rod, means for swinging said actuating devices for simultaneously moving the stops into or out of engagement with said engaging means, and a spring for holding the rod in position to maintain an engagement of said stops.

16. In a typewriting machine and tabulating mechanism, the combination of a carriage, a plurality of column stops on the carriage, each composed of a single piece, engaging means for said stops, means for preventing the removal of said stops from the carriage, said means comprising a rod on which the stops are strung and along which they are adapted to be adjusted, and means for effecting a movement of said rod.

17. In a typewriting machine and tabulating mechanism, the combination of a plurality of column stops each composed of a single piece, engaging means for said stops, means for preventing the removal of said stops from the machine, said means comprising

ing a rod on which the stops are strung and along which they are adapted to be adjusted, and means for effecting a bodily movement of said rod to move the stops into and out of engagement with said engaging means.

18. In a typewriting machine and tabulating mechanism, the combination of a pivot rod, a plurality of column stops carried by said pivot rod and adapted to be swung on the rod as a pivot into and out of operative position and adapted to be adjusted along said rod, means for securing said stops in their adjusted positions, means whereby any of the stops may be retained in inoperative position to the exclusion of the others when said stop or stops are swung to inoperative position, and means for effecting a bodily movement of said rod.

19. In a typewriting machine and tabulating mechanism, the combination of a pivot rod, a plurality of column stops carried by said pivot rod and adapted to be swung on the rod as a pivot into and out of operative position and adapted to be adjusted along said rod, securing means, and means for effecting a movement of said rod to throw the stops thereon into and out of engagement with said securing means.

20. In a typewriting machine and tabulating mechanism, the combination of a pivot rod, a plurality of column stops carried by said pivot rod and adapted to be swung on the rod as a pivot into and out of operative position and adapted to be adjusted along said rod, a rack, and means for moving said rod to move the stops thereon into and out of engagement with said rack.

21. In a typewriting machine and tabulating mechanism, the combination of two parallel bars, a plurality of stops mounted

for sliding movement along one of said bars and adapted to engage the other of said bars, and means for effecting a relative movement bodily between said bars.

22. In a typewriting machine and tabulating mechanism, the combination of a rod, a plurality of stops mounted for sliding movement along said rod, a rack which is adapted to be engaged by said stops, and means for effecting a relative bodily movement between said rod and rack.

23. In a typewriting machine and tabulating mechanism, the combination of two parallel bars, a plurality of stops mounted for pivotal movement around and for sliding movement along one of said bars and adapted to engage the other of said bars, means for effecting a relative bodily movement between said bars, and a cooperating stop movable into cooperation with said first mentioned stops to arrest the carriage.

24. In a typewriting machine and tabulating mechanism, the combination of a pivot rod, a plurality of column stops mounted on said rod for pivotal and longitudinal movement thereon, a rack which is adapted to be engaged by said column stops, means for effecting a relative bodily movement between said pivot rod and rack to lock or release said stops, and a cooperating stop movable into cooperation with said first mentioned stops to arrest the carriage.

Signed at New Bethlehem, in the county of Clarion and State of Pennsylvania, this 24th day of December, A. D. 1907.

WILLIAM JANSON ROCHE.

Witnesses:

CHAS. H. HUTSON,  
DANIEL M. GEIST.