

No. 668,571.

Patented Feb. 19, 1901.

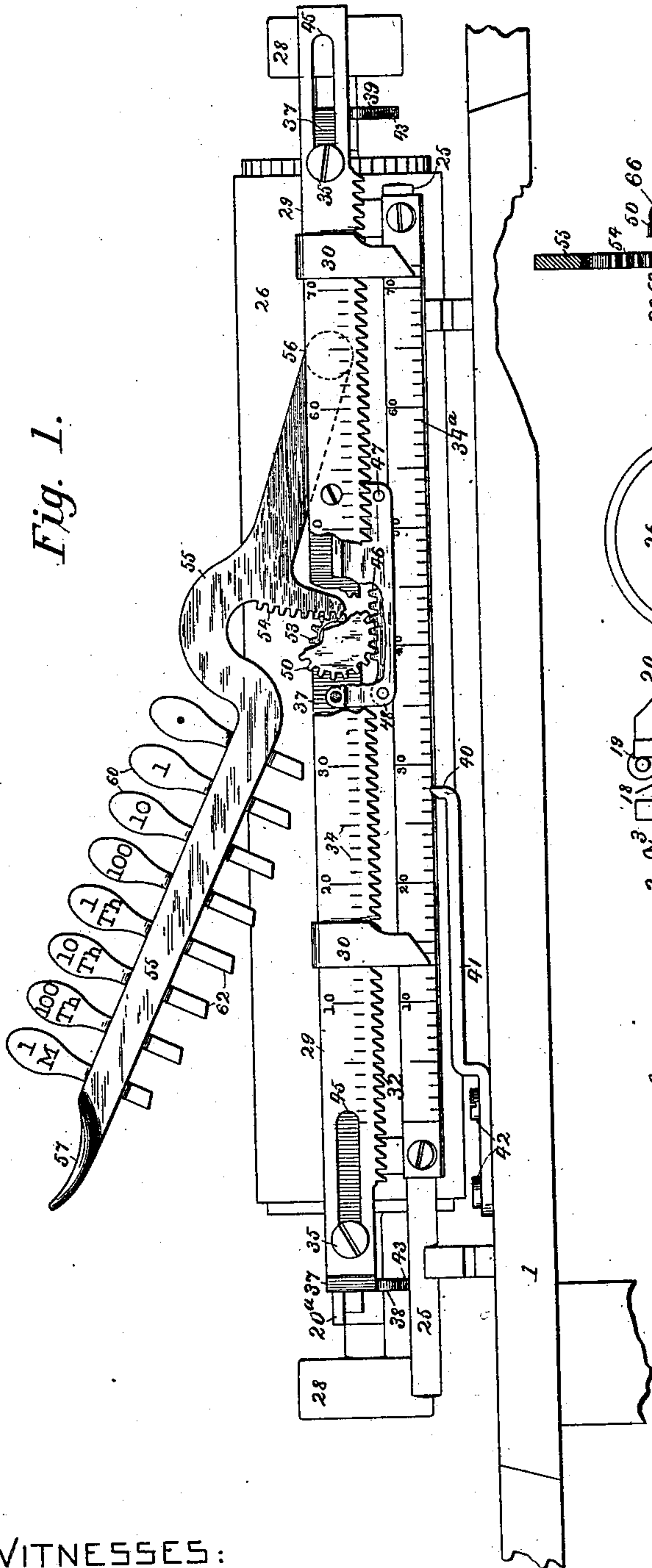
W. J. BARRON.  
TYPE WRITING MACHINE.

(Application filed June 21, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

K. V. Donovan,

E. M. Wells.

Fig. 2.

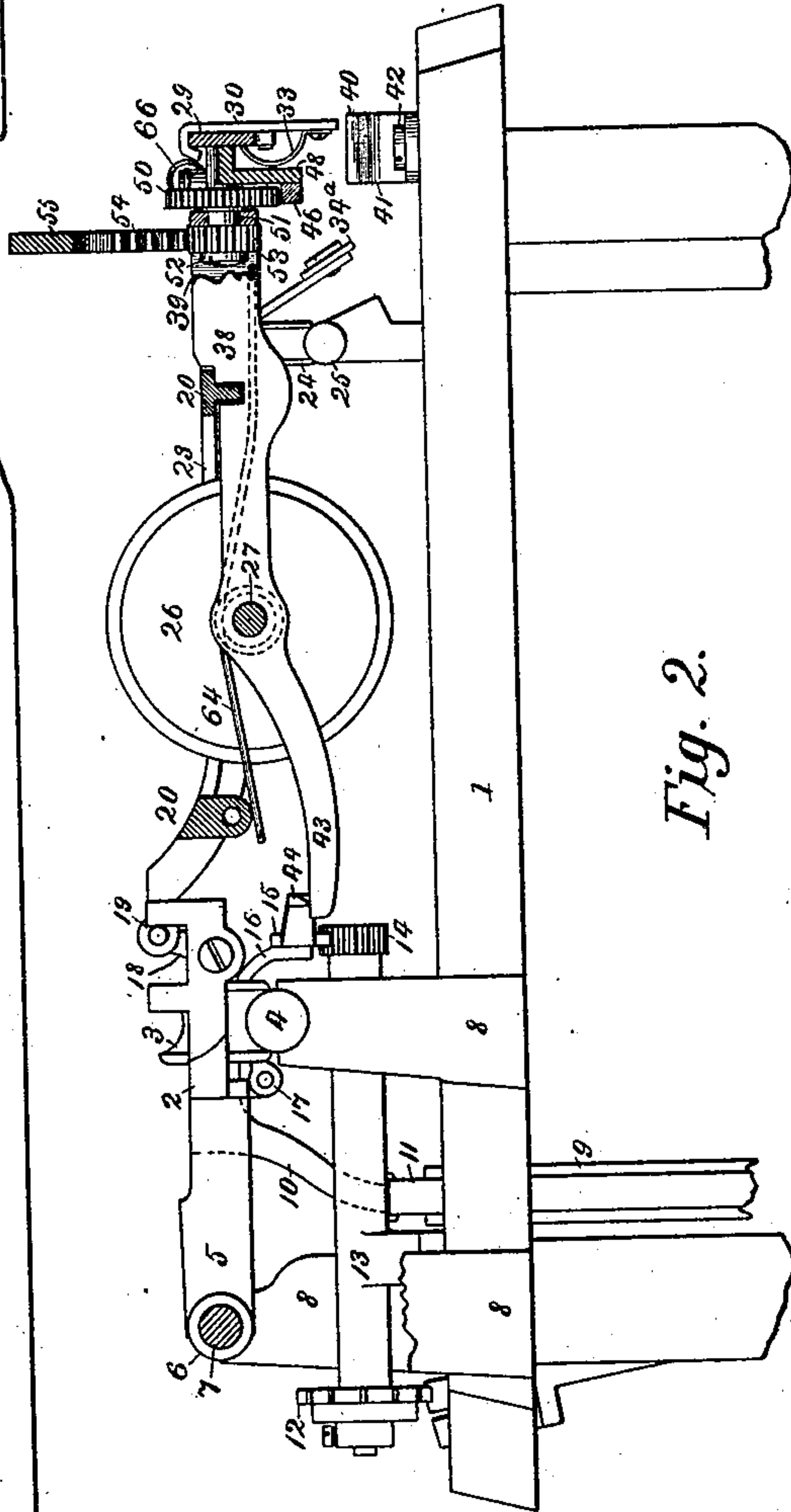
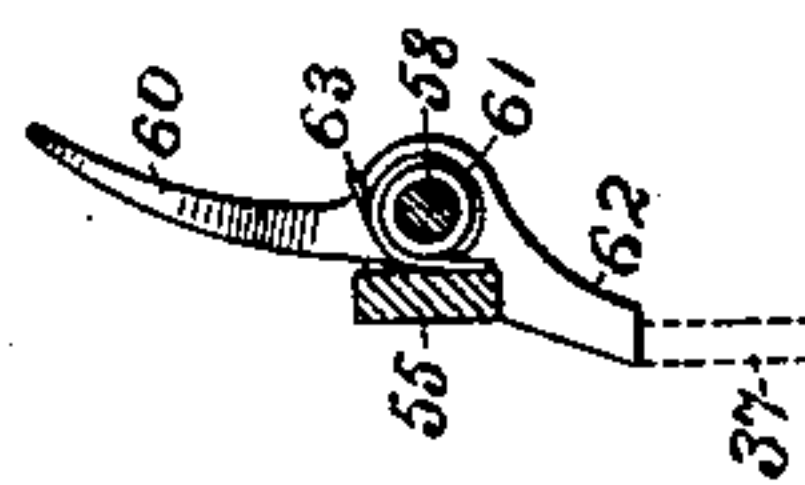


Fig. 3.



INVENTOR

Walter J. Barron.

by Jacob Felbel

HIS ATTORNEY.

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2 Sheets—Sheet 2.

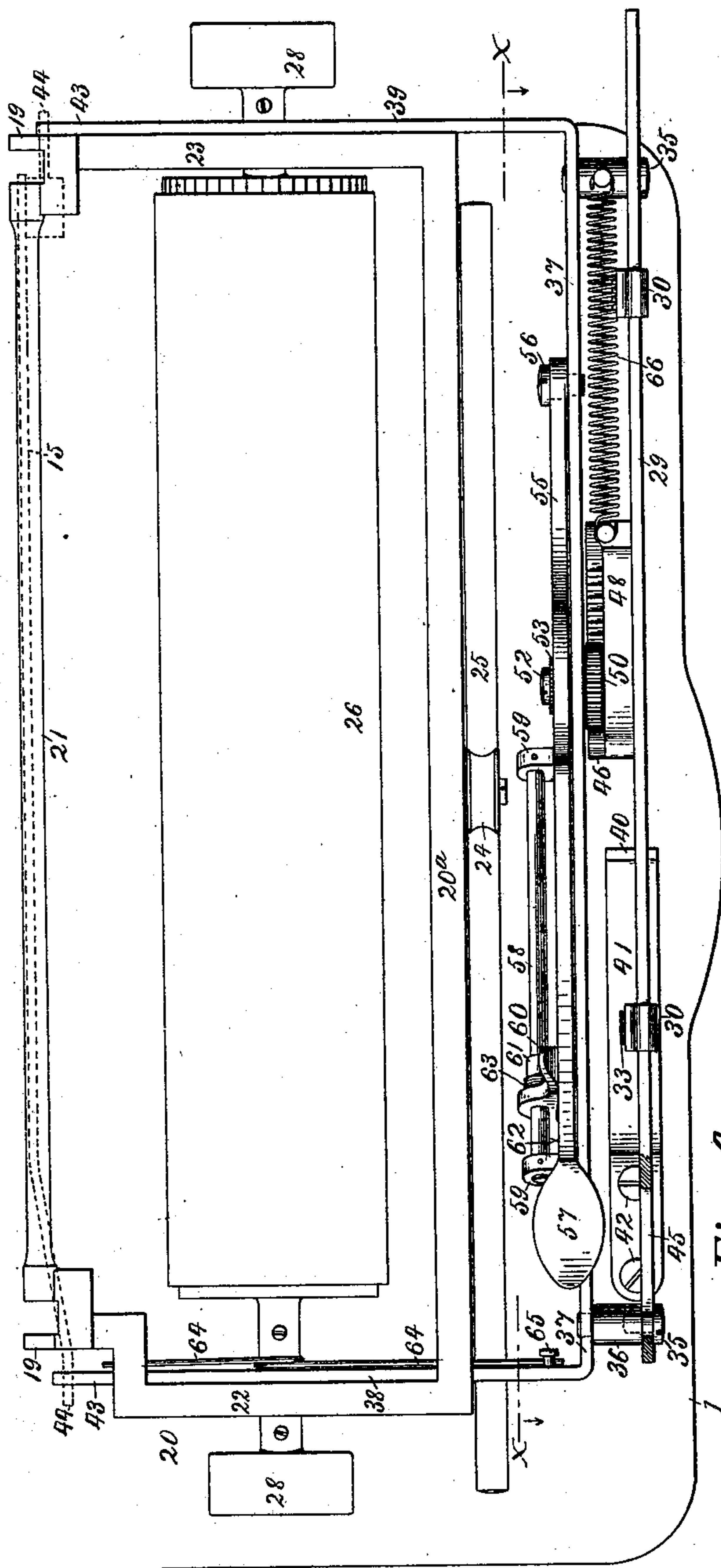


Fig. 4.

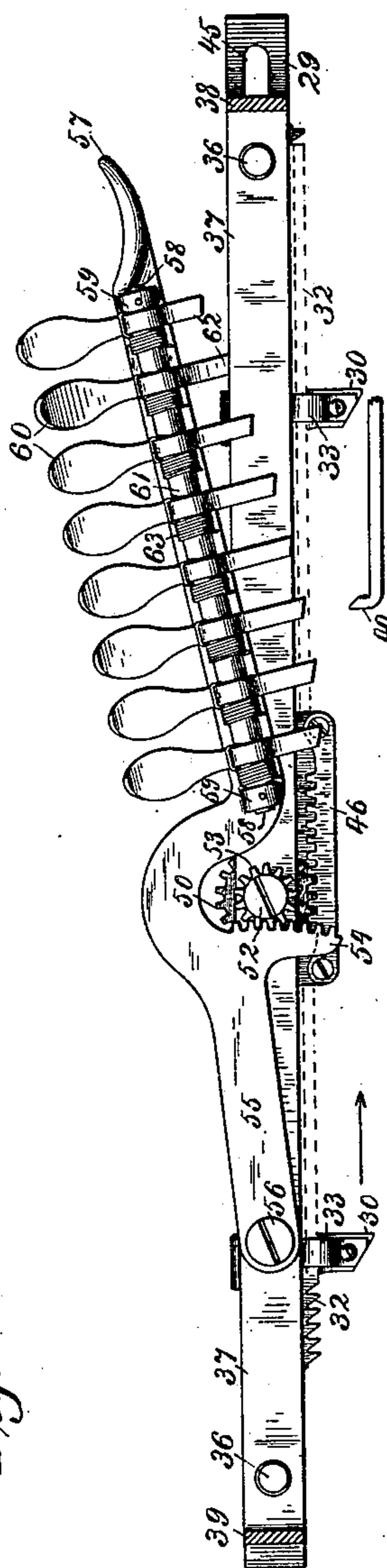


Fig. 5.

WITNESSES:

K. V. Donovan.

E. M. Wells.

Fig. 6.

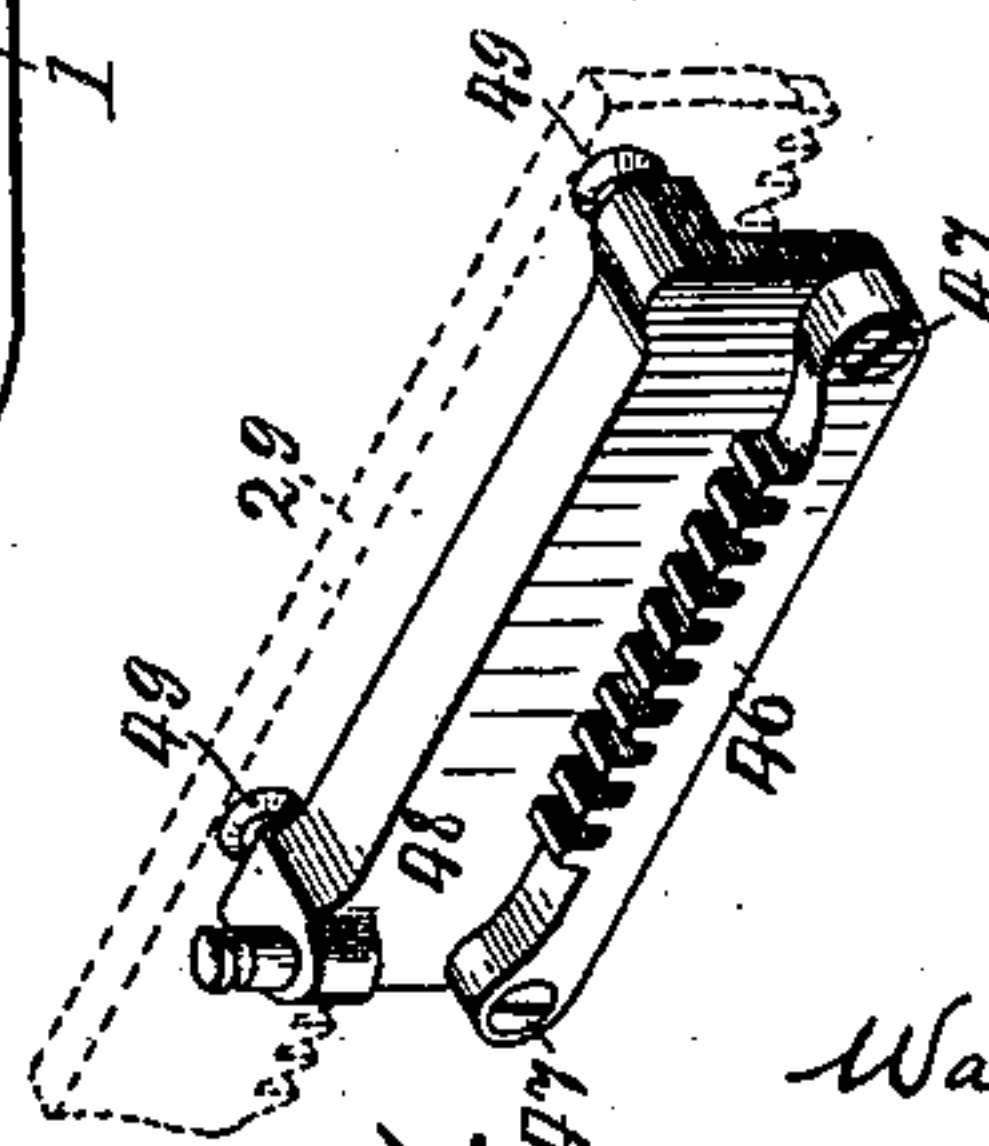
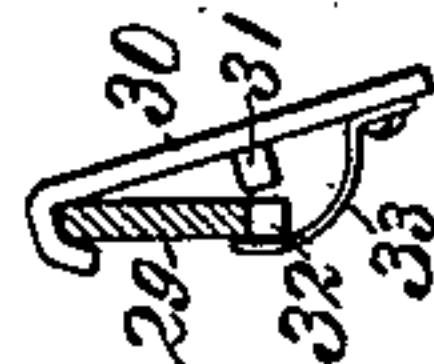


Fig. 7.

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Walter J. Barron  
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HIS ATTORNEY.



# UNITED STATES PATENT OFFICE.

WALTER J. BARRON, OF NEW YORK, (BROOKLYN,) NEW YORK, ASSIGNOR  
TO THE DENSMORE TYPEWRITER COMPANY, OF SYRACUSE, NEW YORK.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 668,571, dated February 19, 1901.

Application filed June 21, 1900. Serial No. 21,034. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER J. BARRON, a citizen of the United States, and a resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type - Writing Machines, of which the following is a specification.

The object of the present invention is to provide a tabulating mechanism for type-writing and other machines which shall be made of few parts and readily placed upon existing machines and which shall enable the operator by a simple manipulation to release the paper or other carriage and move it rapidly to a point for beginning the writing of a number of any desired denomination.

The invention consists of certain features of construction, combinations of devices, and arrangements of parts, all as will be more fully hereinafter set forth, and particularly pointed out in the concluding claims.

In the accompanying drawings, Figure 1 is a front view of the top portion of a Remington No. 6 type-writing machine provided with a tabulating mechanism in accordance with my invention and showing the parts in normal position. Fig. 2 is a side elevation, partly in section, of said type - writing and tabulating mechanism and also showing the parts in normal position. Fig. 3 is a side elevation of a denomination-key in working position, the devices upon which it is mounted being shown in section. Fig. 4 is a plan view of the platen-carriage and tabulating devices. Fig. 5 is an elevation taken on the line  $x x$  of Fig. 4 and looking forwardly, the parts being shown as adjusted to the hundred-thousand position. Fig. 6 is a detail view illustrating the manner of releasing the column-stop from engagement with the teeth provided upon the column-stop bar. Fig. 7 is a perspective view showing the method of attaching to the column-stop bar a short rack by which the said bar may be adjusted end-wise.

In the several views parts are omitted or broken away to more clearly exhibit the invention, and similar parts are designated by similar numerals of reference.

1 indicates a top plate or type-ring, and 2 a

carriage having guide-rolls 3, which run upon a rail 4, and also having an arm 5, which engages a sliding collar 6 upon a rail 7, said rails being supported upon standards 8 rising from the top plate. The carriage is connected to a spring-drum 9 by an arm 10 and a strap 11 and is connected to an escapement or letter-feeding wheel 12 by a shaft, (arranged in housing 13,) a pinion 14, and a rack 15, the latter being mounted on arms 16, which are hinged to the carriage at 17. To the upper ends of a pair of arms 18, pivoted upon the carriage in front of the rail 4, is hinged at 19 a rectangular platen frame or carriage, which is generally designated as 20, and comprises front bar 20<sup>a</sup>, rear bar 21, and end bars 22 and 23, and which is also provided with a front roll 24, running upon a shift-rail 25, and also carries a cylindrical platen 26, whose shaft or axle 27 is journaled in said end bars and is provided with finger-wheels 28.

The foregoing devices, as well as others which it is not necessary to illustrate, are well known in the Remington No. 6 type-writing machine.

Upon a bar 29 is supported a set of column-stops 30, the upper end of each stop hooking over the top edge of the bar and the lower end thereof projecting considerably below the bar, and each stop being also provided both with a rearwardly-projecting tooth 31 for engaging a set of teeth or rack 32, formed or provided upon the lower edge of said bar, and also with a curved spring 33, the lower end whereof is fastened to the stop and the upper end whereof bears against the rear vertical face of the bar and serves to hold the tooth in engagement with the rack. The lower end of the stop may be drawn forward to disengage the tooth, Fig. 6, and the stop may be then adjusted to any desired position along said bar by reference to a scale 34, provided upon the front face thereof and corresponding to the usual carriage-scale 34<sup>a</sup>, and may then be released, whereupon the tooth 31 will snap into engagement with the rack.

The column-stop bar 29 is supported by means of screws 35 upon horizontal studs 36, projecting forwardly from the longitudinal front bar 37 of a U frame or bail, the side



arms 38 39 whereof are pivoted upon the platen-shaft, so as to permit the bail to be swung downwardly to bring the column-stops into position for engaging an upwardly-projecting stop 40, which latter is carried by an arm 41, secured upon the top plate 1 by screws 42, and has a broad working face to accommodate the capital-shift movement of the platen-frame. Each of the side arms 38 39 is prolonged at 43 to extend beneath arms or extensions 44, formed upon the rack-bar 15 of the carriage-feeding mechanism, whereby upon the depression of said bail the devices 43 lift the feed-rack out of engagement with the pinion 14, thus releasing the carriage, which is moved rapidly to the left by its spring-drum 9 until arrested by engagement of a column-stop with the fixed stop 40.

The screws 35 are shouldered and engage longitudinal slots 45, formed in said column-stop bar near its ends, whereby the bar is enabled to have a limited independent endwise movement or adjustment upon said depressible frame, such movement being imparted thereto by means of a short horizontal rack 46, secured by screws 47 upon the rear face of a short angle-bar 48, which is secured by screws 49 to the rear vertical face of said column-stop bar, said rack being driven by a spur-wheel 50, arranged over and in engagement with said rack and fixed upon the forward end of a horizontal shaft 51, which is journaled in the bar 37 about midway of its length. To the rear end of said shaft is rigidly secured by a screw 52 a pinion 53, which meshes with a gear 54, formed or provided upon a diagonally-extending lever 55, pivoted at its right-hand end at 56 upon the rear face of the bar 37 and having a finger-piece 57, so that by a depression of said lever the pinion 53 and spur-wheel 50 may be rotated, causing a rectilinear movement of both the rack 46 and the column-stop bar 29 toward the left or in the direction of the letter-space movement of the carriage. A diagonally-extending rod or shaft 58 is fixed in ears 59, projecting rearwardly from the lever 55 at its left-hand portion, and independently-movable keys 60, which are marked with numbers or letters to indicate various denominations, are pivotally mounted along said rod, a collar or lateral hub 61 and a downwardly-extending stop or contact 62 being provided upon each key and a returning-spring 63 being coiled around each collar.

In operation the positions of the columns upon the page may be predetermined by the stops 30, which are successively swung forward out of engagement with the teeth 32, Fig. 6, and adjusted along the bar 29 by reference to the scale 34, the spring 33 causing the stop-tooth 31 to snap into reengagement when the stop is let go. Then the particular key 60 which corresponds to the denomination of the number to be written is pressed rearwardly to swing the contact 62 thereon (which is normally out of line with or in rear

of the bar 37) forwardly into a position over the bar 37. The lever 55 is depressed and through the gears 54, 53, 50, and 46 imparts a sliding endwise movement to the bar 29 until said lever and bar are arrested by the engagement of said contact 62 with the top edge of the bar 37, Figs. 3 and 5, at which time the longitudinal adjustment of the column-stop bar 29 will correspond to the denomination indicated by the selected key 60. A further depression of the key 57 causes the entire column-stop-bar frame to swing downwardly about the platen-axle, bring the column-stops down into a position for engaging the abutment 40, and through the arms 43 lifting the rack 15 out of engagement with the pinion 14, thus freeing the carriage and enabling it to move along rapidly under the influence of its spring-drum 9 until arrested by the contact of a column-stop with the said abutment 40. Upon the key 57 being released from pressure the column-stop frame is raised by a spring 64, which is coiled around the left-hand platen-hub and bears upwardly at its rear end against the under side of the platen-frame and at its forward end against a projection 65, provided upon the bail-frame 38, thus permitting the rack 15 to drop into reengagement with the pinion 14 and disengaging the column-stop 30 from the abutment 40. A draw-spring 66, one end of which is connected to the right-hand stud 36 and the other end of which is caught over a projection upon the plate 48, serves to slide the column-stop bar reversely, thereby rotating the gears 50 and 53 to lift the lever 55 to normal position. The tension of the spring 66 should be relatively weaker than that of the spring 64, so as to insure the reengagement of rack 15 with pinion 14 before the column-stop bar is retracted. After the type-keys (not shown) are operated to write the desired number the foregoing operation is repeated in order to bring the carriage to the proper denominational position for beginning the writing of the desired number in the next column, and so on. It will be understood that the contacts 62 are of such length and are so arranged with reference to the axis 56 of the lever as to enable a step-by-step adjustment of the lever, and hence a corresponding endwise adjustment of the column-stop bar through one or more complete letter-space intervals, or, in other words, said lever and column-stop bar may be simultaneously adjusted through any one of a number of predetermined intervals, the movement of the bar being equal to one, two, three, four, five, six, seven, or eight complete letter-spaces, according to the denomination-key selected. To illustrate, if it be desired to write the number "314,000" the second key from the left at Fig. 1 or from the right at Fig. 5 is pressed, the finger-piece 57 is pushed down as far as it will go, and the carriage being thereby released is advanced rapidly until arrested by contact of a column-stop with the abutment 40, when said



finger-piece 57 may be released and the type-keys operated to cause said number to be written upon the paper. If the next number to be written should be "86," the third key from the right at Fig. 1 is selected and the operations repeated.

It will be observed that the independently-actuable denomination-keys 60 are operatively connected both to the carriage-releasing mechanism and to the stops 30, the contacts 62 mechanically limiting the movement or determining the extent of adjustment of said stops, as well as of the bar 29 and lever 55, and also enabling the lever 35 to depress the column-stop frame. Said lever or the key 57 thereon is used to move said bar 29 endwise and transversely and also to operate the carriage-releasing mechanism, all of said operations being performed simultaneously by a single downward stroke of said lever or key. Hence the mechanism which releases the carriage from the control of its escapement mechanism is itself controlled by the same means or devices which serve to adjust a stop 30 to different denominational positions.

It will be seen that I have contrived a tabulating mechanism which is simple in construction and operation, inexpensive to manufacture, and which can be adapted readily to existing types of machines. Parts of the improvements may be used without others, and many changes may be made in the details of construction and arrangement within the scope of the invention.

Although I have illustrated the invention in connection with a type-writing machine, yet certain of my improvements are also applicable to adding-machines in which it may be desirable to move a carriage quickly to different denominational positions.

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

1. The combination of a carriage, a stop arranged upon the carriage and adjustable longitudinally of the carriage to different denominational positions, and means for mechanically determining the extent of adjustment of said stop.

2. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, and means for adjusting said stops simultaneously to different denominational positions in the direction of their travel and independently of the carriage.

3. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of said carriage, and a series of column-stops independently adjustable along said bar.

4. In a type-writing and tabulating mechanism, the combination of a carriage, bar 29, a series of column-stops arranged thereon, slots 45, and means arranged upon the car-

riage for engaging said slots to support said bar and permit endwise adjustment thereof.

5. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, means for adjusting said stops simultaneously in the direction of their travel and independently of the carriage to different denominational positions, and means for mechanically limiting the extent of such adjustment.

6. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of said carriage, means for mechanically limiting the extent of such adjustment, and a series of column-stops independently adjustable along said bar.

7. The combination of a carriage, a stop arranged upon the carriage and adjustable longitudinally of the carriage to different denominational positions, means for mechanically determining the extent of adjustment of said stop, and a spring for returning said column-stops simultaneously to normal position.

8. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, means for adjusting said stops simultaneously in the direction of their travel and independently of the carriage to different denominational positions, and a returning-spring connected at one end to said bar and at the other end to a part arranged upon the carriage.

9. The combination of a carriage, a stop arranged thereon and adjustable to different denominational positions, a lever operatively connected to said stop, and means for arresting said stop-lever and thus mechanically limiting the adjustment of said lever and said stop.

10. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, and a lever connected to said stops to adjust them simultaneously independently of the carriage to different denominational positions.

11. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a lever connected to the bar to move the same endwise, and a series of column-stops independently adjustable along said bar.

12. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, and a lever arranged upon said carriage and connected to said bar to move the latter to different denominational positions.

13. In a type-writing and tabulating mech-



anism, the combination of a carriage, a series of independently-adjustable column-stops, a lever connected to said stops to adjust them simultaneously to different denominational positions independently of the carriage, and means for mechanically limiting the extent of adjustment of said lever and said stops.

14. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops arranged thereon, a lever also arranged on the carriage and connected to said column-stops to adjust them simultaneously to different denominational positions independently of said carriage, and means for mechanically limiting the adjustment of said lever and said stops.

15. The combination of a carriage, a stop arranged thereon, and a series of denomination-keys operatively connected to said stop.

16. In a type-writing and tabulating mechanism, the combination of a carriage, a series of column-stops, and means including a set of independently-actuable denomination-keys for adjusting said column-stops simultaneously to different denominational positions.

17. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, and means, including a series of denomination-keys, for adjusting said column-stops simultaneously to different denominational positions.

18. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, and means for adjusting said stops simultaneously in the direction of their travel and independently of the carriage to different denominational positions, said adjusting means including a series of independently-actuable denomination-keys which are also constructed to travel with the carriage.

19. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable independently of the carriage, a series of column-stops independently adjustable along said bar, and means, including a series of denomination-keys, for variably adjusting said bar.

20. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of the carriage, a series of column-stops independently adjustable along said bar, and means for variably adjusting said bar in the direction of its length, said means including a series of independently-actuable denomination-keys also arranged upon said carriage.

21. In a type-writing and tabulating mechanism, the combination of a carriage, a series

of column-stops, and means, including a set of independently-actuable denomination-keys, for adjusting said column-stops simultaneously to different denominational positions, said keys being provided with means for mechanically limiting the extent of adjustment of said stops.

22. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, and means, including a series of denomination-keys, for adjusting said column-stops simultaneously to different denominational positions, said keys being provided with means for mechanically limiting the extent of adjustment of said stops.

23. The combination of a carriage, a stop arranged thereon, a lever connected to said stop to adjust it to different denominational positions, and a series of denomination-keys mounted on said lever.

24. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops, a lever connected to said stops to adjust them simultaneously to different denominational positions, and a series of independently-actuable denomination-keys mounted on said lever.

25. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with said carriage, a lever connected to said stops to variably adjust the same, and a series of independently-actuable keys mounted upon said lever.

26. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a lever connected to said bar to give it variable endwise adjustment, a series of keys mounted upon said lever, and a series of independently-adjustable column-stops carried by said bar.

27. In a type-writing and tabulating mechanism, the combination of a carriage, an endwise-movable bar arranged on the carriage, a series of column-stops independently adjustable along said bar, a lever also arranged upon said carriage, a rod mounted upon said lever, and a series of independently-actuable denomination-keys pivotally mounted upon said rod and each provided with a contact.

28. In a type-writing and tabulating mechanism, the combination of a carriage, column-stop bar 29, slots 45, means arranged upon the carriage for engaging said slots to support the bar and permit endwise movement thereof, lever 55 connected to said bar, rod 58, denomination-stops 60 mounted upon said rod, contacts 62, and springs 63.

29. The combination of a carriage, a stop arranged thereon, a lever connected to said stop to variably adjust the same, and a series of independently-actuable denomination-keys



mounted upon said lever and constructed to mechanically limit the adjustment of said lever and said stop.

30. In a type-writing and tabulating mechanism, the combination of a carriage, a series of column-stops, a lever connected to said stops to adjust them to different denominational positions, and a series of denomination-keys mounted upon said lever and constructed to mechanically limit the adjustment of said lever and said stops.

31. In a type-writing and tabulating mechanism, the combination of a carriage, a longitudinally-movable bar, a series of column-stops independently adjustable along said bar, a lever, and toothed gearing connecting said lever to said bar.

32. In a type-writing and tabulating mechanism, the combination of a carriage, endwise-movable column-stop bar 29, lever 55, and gears 54, 53, 50 and 46.

33. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a series of column-stops carried by said bar, a lever arranged upon said carriage, and toothed gearing connecting said lever to said bar.

34. In a type-writing and tabulating mechanism, the combination of a carriage, a column-stop bar, a rack on said bar, a gear meshing with said rack, a pinion rigidly connected to said gear, a lever provided with a gear meshing with said pinion, and a returning-spring.

35. The combination of a carriage, a stop arranged thereon and adjustable to different denominational positions in a direction parallel with the run of the carriage, means for moving said stop transversely, and a stop arranged upon the framework.

36. The combination of a carriage, a stop arranged thereon and adjustable to different denominational positions in a direction parallel with the run of the carriage, a spring for returning said stop after said adjustment, means for moving said stop transversely, a separate spring for returning said stop after such transverse movement, and a stop arranged upon the framework.

37. The combination of a carriage, a stop arranged thereon and adjustable longitudinally of the carriage to different denominational positions, means for mechanically determining the extent of adjustment of said stop, means for moving said stop in a direction transverse to the direction of its adjustment, and a stop arranged upon the framework.

38. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops constructed to travel with the carriage, means for moving said stops simultaneously in the direction of their travel and independently of the carriage to different denominational positions, means for moving said stops in a di-

rection transverse to the direction of their travel, and a stop arranged upon the framework.

39. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of the carriage, a series of column-stops independently adjustable along said bar, means for moving said bar transversely, and a stop arranged upon the framework.

40. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of the carriage, a series of column-stops independently adjustable along said bar, a key for depressing said bar, and a stop arranged upon the framework beneath said bar.

41. In a type-writing and tabulating mechanism, the combination of a carriage, as 20, a frame hinged upon the carriage, a bar supported upon said frame and constructed to move independently endwise, and a series of column-stops independently adjustable along said bar.

42. In a type-writing and tabulating mechanism, the combination of a carriage, as 20, a bail hinged upon said carriage, column-stop bar 29 having slots 45, and means arranged upon said bail for engaging said slots to support said bar and permit its endwise movement.

43. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof and adjustable endwise independently of the carriage, a series of column-stops independently adjustable along said bar, a spring for returning said bar endwise after its said adjustment, means for moving said bar transversely, and a separate spring for returning said bar after a transverse movement.

44. In a type-writing and tabulating mechanism, the combination of a carriage, a series of column-stops constructed to travel with the carriage, a key for adjusting said column-stops simultaneously in a direction parallel with their travel and independently of the carriage, a stop arranged upon the framework, and means for enabling said column-stops to be moved in a direction transversely of their travel.

45. In a type-writing and tabulating mechanism, the combination of a carriage, a bar supported upon the carriage and constructed for endwise adjustment independently thereof, a series of column-stops independently adjustable along said bar, an adjusting-lever connected to said bar, and means for enabling said bar to be moved transversely.

46. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a series of column-stops inde-

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pendently adjustable along said bar, and a lever also arranged upon said carriage and connected to said bar to move the latter both endwise and transversely.

5 47. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, a lever  
10 also arranged upon said carriage and connected to said bar to adjust the latter endwise, and means for mechanically determining the extent of adjustment of said lever and said bar, said lever being also constructed to im-  
15 part a transverse movement to said bar.

48. The combination of a carriage, a stop arranged thereon, a series of denomination-keys operatively connected to said stop, means for moving said stop transversely of the car-  
20 riage travel, and a stop arranged upon the framework.

49. In a type-writing and tabulating mechanism, the combination of a carriage, a series of column-stops, means for adjusting them  
25 simultaneously to different denominational positions, said adjusting means including a series of independently-actuable denomination-keys, and means for moving said stops in a direction transverse to the direction of  
30 said adjustment.

50. The combination of a carriage, a stop arranged thereon and adjustable in a direction longitudinally of the carriage, a series of denomination-keys for mechanically deter-  
35 mining the extent of adjustment of said stop, and means for moving said stop in a direction transverse to the direction of travel of said carriage.

51. The combination of a carriage, a stop  
40 arranged to travel with the carriage, means, including a series of keys, for adjusting said stop to different denominational positions, means for moving said stop in a direction transverse to the direction of said adjustment,  
45 and a stop arranged upon the framework.

52. In a type-writing and tabulating mechanism, the combination of a series of independently-adjustable column-stops arranged to travel with said carriage, means, including  
50 a series of keys, for adjusting said stops simultaneously to different denominational positions, means for moving said stops in a direction transverse to the direction of said adjustment, and a stop arranged upon the frame-  
55 work.

53. In a type-writing and tabulating mechanism, the combination of a carriage, a bar supported upon the carriage, a series of column-stops independently adjustable upon  
60 said bar, means, including a series of denomination-keys, for giving said bar a variable endwise adjustment, and means for moving said bar in a direction transverse to its length.

54. In a type-writing and tabulating mechanism, the combination of a carriage, a bar  
65 arranged upon said carriage and carrying a series of independently-adjustable column-

stops, a series of denomination-keys also arranged upon said carriage, connections from said denomination-keys to said bar, and means  
70 for causing said bar to move in a direction transverse to its length.

55. In a type-writing and tabulating mechanism, the combination of a carriage, frame  
37, 38, 39, bar 29 supported upon said frame, 75 lever 55 connected to said bar 29, and independently-actuable keys 60 mounted upon said lever.

56. The combination of a carriage, a stop, a lever, a series of independently-actuable  
80 denomination-keys mounted upon said lever, and means for enabling said lever to adjust said stop to different denominational positions and also to move said stop in a direction transverse to the direction of said adjust- 85 ment.

57. In a type-writing and tabulating mechanism, the combination of a carriage, a series of independently-adjustable column-stops, a lever, a series of denomination-keys mounted  
90 upon said lever, and means for enabling said lever to adjust said stops simultaneously to different denominational positions and also to move said stops simultaneously in a direction transverse to the direction of said adjust- 95 ment.

58. In a type-writing and tabulating mechanism, the combination of a carriage, a series of column-stops constructed to travel with the carriage, a lever, a series of independ- 100 ently-actuable keys mounted upon said lever, and means for enabling said lever to move said stops in two directions, one transverse to the other.

59. In a type-writing and tabulating mechanism, the combination of a carriage, a bar  
105 arranged upon the carriage and carrying a series of independently-adjustable column-stops, a lever also arranged upon the carriage, a series of independently-actuable 110 keys mounted upon said lever, and means for enabling said lever to move said bar both endwise and transversely.

60. In a type-writing and tabulating mechanism, the combination of a carriage, as 20, 115 a frame mounted upon the carriage, an endwise-movable bar arranged upon said frame and carrying a series of column-stops, a lever also arranged upon said frame, a rod arranged upon said lever, and a series of independ- 120 ently-actuable denomination-keys arranged upon said rod and provided with contacts both for limiting the adjustment of the lever and also for enabling the lever to move said frame transversely. 125

61. In a type-writing and tabulating mechanism, the combination of a carriage, a bar thereon, a series of column-stops on said bar, a key, and means for enabling said key by a single stroke to move said bar both endwise 130 and transversely.

62. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and carrying a series of



column-stops, a lever also arranged upon the carriage, and means for enabling said lever by a single stroke to move said bar both endwise and transversely.

5 63. The combination of a carriage, a stop arranged thereon, and mechanism also arranged upon said carriage for moving said stop to different denominational positions, said mechanism including a series of inde-  
10 pendently-actuable denomination-keys.

64. In a type-writing and tabulating mechanism, the combination of a carriage, a bar arranged thereon and carrying a series of independently-adjustable column-stops, and  
15 mechanism also arranged upon said carriage for giving said bar a variable endwise adjustment, said adjusting mechanism including a series of independently-actuable denomination-keys.

20 65. The combination of a carriage, an escapement mechanism therefor, a stop arranged upon said carriage and adjustable to different denominational positions, means for adjusting said stop, and mechanism controlled by said adjusting means for releasing  
25 said carriage from the control of said escapement mechanism.

66. In a type-writing and tabulating mechanism, the combination of a carriage, an escapement mechanism therefor, a series of independently-adjustable column-stops constructed to travel with the carriage, means  
30 for adjusting said stops simultaneously to different denominational positions in the direction of their travel and independently of the carriage, and a carriage-release mechanism controlled by said adjusting means.

67. In a type-writing and tabulating mechanism, the combination of a carriage, an escapement mechanism, a bar arranged upon  
40 said carriage and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, means for adjusting said bar endwise independently of  
45 said carriage, and a carriage-release mechanism controlled by said adjusting means.

68. The combination of a carriage, escapement mechanism, a stop arranged upon said carriage, a lever connected to said stop for  
50 adjusting the latter to different denominational positions, and a carriage-releasing mechanism controlled by said lever.

69. In a type-writing and tabulating mechanism, the combination of a carriage, an escapement mechanism, a series of independently-adjustable column-stops constructed to  
55 travel with the carriage, a lever connected to said stops to adjust them simultaneously independently of the carriage to different denominational positions, and a carriage-releasing mechanism controlled by said lever.

70. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar arranged upon  
65 said carriage and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, a lever arranged upon

said carriage and connected to said bar to move the latter to different denominational positions, and a carriage-release mechanism  
70 controlled by said lever.

71. The combination of a carriage, escapement mechanism, carriage-release mechanism, a stop arranged upon the carriage, and  
75 a series of denomination-keys operatively connected to said stop and to said carriage-release mechanism.

72. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar carrying a series of  
80 independently-adjustable column-stops, means including a series of independently-actuable denomination-keys for adjusting said bar endwise, and a carriage-releasing mechanism controlled by said adjusting means.

73. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar arranged upon said  
85 carriage and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, means, including a series of denomination-keys, for variably adjusting said bar, and a carriage-releasing mechanism controlled by said adjusting means.

74. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar arranged on said  
95 carriage and extending longitudinally thereof, a series of column-stops independently adjustable along said bar, means, including a series of independently-actuable denomination-keys also arranged upon said carriage, for variably adjusting said bar in the direction of its length, and a carriage-releasing mechanism controlled by said adjusting  
105 means.

75. The combination of a carriage, escapement mechanism, a stop, a lever connected to said stop to adjust it to different denominational positions, a series of denomination-  
110 keys mounted upon said lever, and a carriage-releasing mechanism controlled by said lever.

76. In a type-writing and tabulating mechanism, the combination of a carriage, an escapement mechanism, a series of independently-adjustable column-stops, a lever  
115 connected to said stops to adjust them simultaneously to different denominational positions, a series of independently-actuable denomination-keys mounted on said lever, and a carriage-releasing mechanism controlled by said lever.

77. In a type-writing and tabulating mechanism, the combination of a carriage, an escapement mechanism, a bar arranged upon  
125 said carriage and carrying a series of independently-adjustable column-stops, a lever connected to said bar to variably adjust the same, a series of keys mounted upon said lever, and a carriage-escapement mechanism controlled by said lever.

78. The combination of a carriage, escapement mechanism, a carriage-releasing mechanism, a stop arranged upon said carriage



and adjustable to different denominational positions, means for moving said stop transversely and simultaneously operating said carriage-releasing mechanism, and a stop arranged upon the framework.

79. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, carriage-releasing devices, a bar arranged upon said carriage and carrying a series of independently-adjustable column-stops, means for adjusting said bar longitudinally, means for operating said bar transversely and simultaneously operating said carriage-releasing mechanism, and a stop arranged upon the framework.

80. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar arranged upon said carriage and extending longitudinally thereof and adjustable endwise independently of the carriage, a series of column-stops independently adjustable along said bar, a key for depressing said bar, carriage-releasing devices operated by said key, and a stop arranged upon the framework beneath said bar.

81. In a type-writing and tabulating mechanism, the combination of a carriage, as 20, escapement mechanism, a frame hinged upon the carriage, a bar supported upon said frame and constructed to move independently endwise, a series of column-stops independently adjustable along said bar, carriage-releasing devices operated by said frame, and a stop arranged upon the framework.

82. In a type-writing and tabulating mechanism, the combination of a carriage, as 20, carriage-escapement mechanism including rack 15, a bail hinged upon said carriage, column-stop bar 29 having slots 45, means arranged upon said bail for engaging said slots to support said bar and permit its endwise movement, and extensions 43 provided upon the bail for releasing said rack.

83. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, a bar arranged upon the carriage and constructed for endwise adjustment independently thereof, a series of col-

umn-stops independently adjustable along said bar, an adjusting-lever connected to said bar, means for enabling said bar to be moved transversely, and carriage-releasing devices constructed to operate at said transverse movement of said bar.

84. The combination of a carriage, escapement mechanism, a stop arranged upon said carriage, a series of denomination-keys operatively connected to said stop, means for moving said stop transversely of the carriage travel, carriage-releasing devices constructed to operate at said transverse movement of said stop, and a stop arranged upon the framework.

85. The combination of a carriage, escapement mechanism, carriage-releasing mechanism, a stop, and a key operatively connected to said stop and to said releasing mechanism and constructed to both adjust said stop and operate said release mechanism by a single stroke.

86. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, carriage-releasing mechanism, a bar on said carriage, a series of column-stops on said bar, a key, and means for enabling said key by a single stroke to move said bar both endwise and transversely and also operate said carriage-releasing mechanism.

87. In a type-writing and tabulating mechanism, the combination of a carriage, escapement mechanism, carriage-releasing mechanism, a bar arranged upon said carriage and carrying a series of independently-adjustable column-stops, a lever also arranged upon the carriage, and means for enabling said lever by a single stroke to move said bar endwise and transversely and also operate said carriage-releasing mechanism.

Signed in the borough of Manhattan, city of New York, in the county of New York and State of New York, this 19th day of June, A. D. 1900.

WALTER J. BARRON.

Witnesses:

K. V. DONOVAN,  
E. M. WELLS.