

(No Model.)

W. P. MILLER.

SCALE FOR TYPE WRITING MACHINES.

No. 412,521.

Patented Oct. 8, 1889.

Fig. 1.

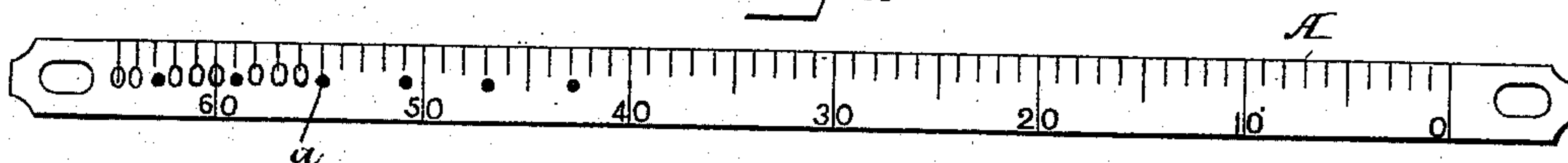
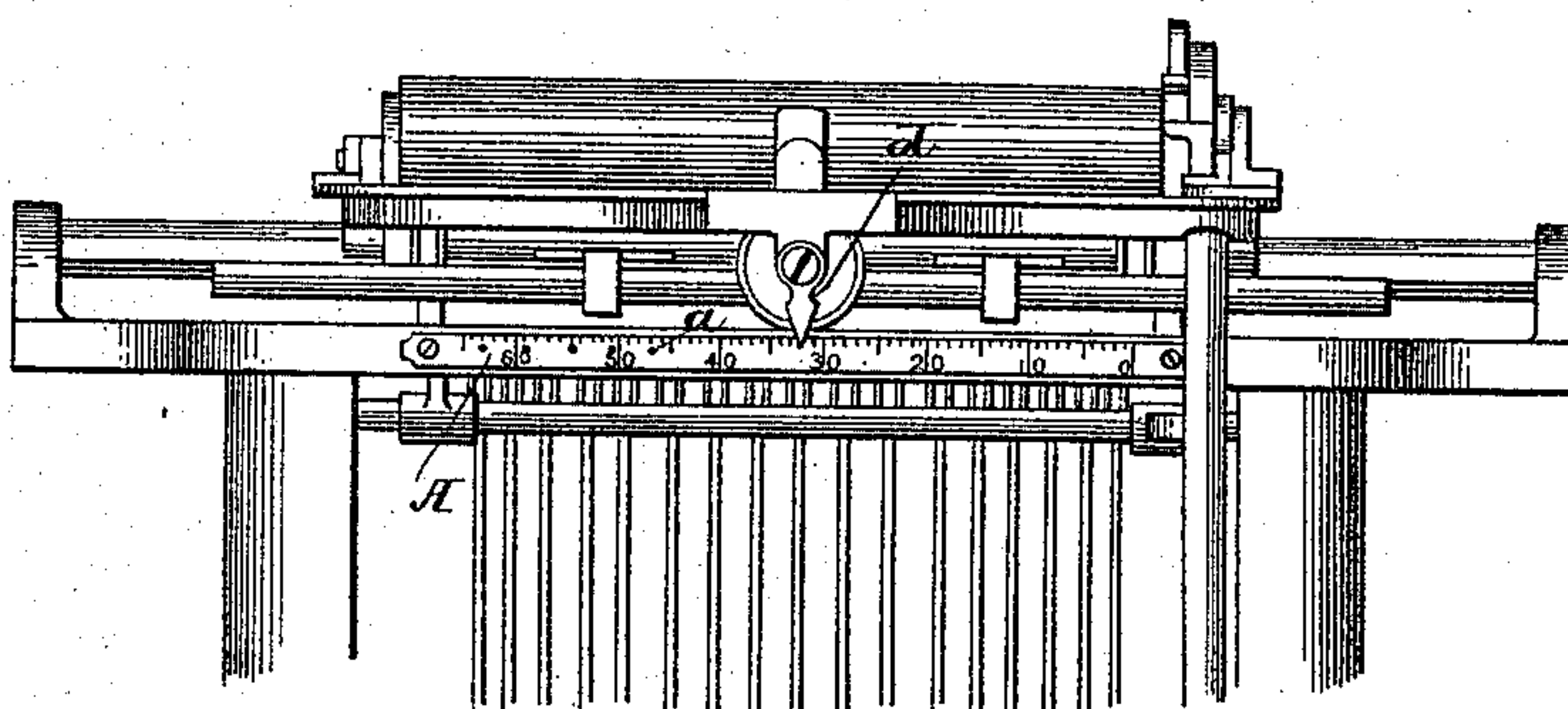


Fig. 2.



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WALTER P. MILLER, OF DENVER, COLORADO.

## SCALE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 412,521, dated October 8, 1889.

Application filed June 8, 1888. Serial No. 276,455. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER P. MILLER, a citizen of the United States, residing in Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Scales for Type-Writing Machines, of which the following is a specification.

My invention has for its object to facilitate the printing of columns of figures by means of type-writers; and my invention consists of a scale having a supplemental mark, figure, or sign opposite each fourth of the graduations of the usual scale for the whole or a part of the length of the latter, whereby the operator can determine at a glance the proper position to which to adjust the carriage to place the initial figure of each number in its proper place in vertical column.

In the drawings, Figure 1 is a view showing my improved scale. Fig. 2 is a view showing the scale in position on the machine in respect to the frame, carriage, and pointer.

The index plates or scales A of type-writers are graduated or divided into sections by spacing-marks, each indicating the extent of a single movement of the carriage under a single operation of one of the keys, and the carriage is provided with a pointer d, which is arranged to traverse the scale, so that the operator can determine the position of any letter or figure as regards the initial letter or figure and properly space the matter printed. No difficulty is presented in the use of these parts as usually constructed in spacing and arranging any matter, letters, or figures which follow other matter in regular succession; but where it is necessary to place columns of figures with those representing equal values in the same vertical line—that is, with the units or tens of one number in line vertically with the units or tens of the preceding number—it is necessary to count out upon the index-plate the exact number of figures in each number to be printed and to set the carriage with its index at the position to be occupied by the left-hand figure and then print the figures in succession.

It is found in practice that the operator is extremely liable to make mistakes in positioning the first figure, especially in printing col-

umns of figures representing some dollars and cents and some cents or dollars only, so that figures representing hundreds are brought into the tens column or tens in the cents column, &c. While by long practice upon this special class of work operators with the machine having the ordinary scale-plate can acquire much facility, yet those who are engaged in a miscellaneous class of work are liable to make mistakes, resulting in vexatious delays and expense. To avoid these objections, I make a scale having the usual graduations, and in addition I place a mark *a* at one point, assumed to be that where the index-finger should be when the carriage is in position to print the period separating the dollar and the cents columns. The graduations to the right and left of this mark *a* are then subdivided into divisions of three, with a mark *a* opposite every fourth graduation between each division, and, if desired, the three intermediate places may be indicated by ciphers, arranged as shown. With an index-plate thus constructed the places of the various figures representing different numbers in proper position in a vertical column can be effected with certainty, rapidity, and facility even by inexperienced operators. Thus, if the first number of a column is .23, representing twenty-three cents, the operator puts the pointer of the carriage upon one of the marks *a*, assumed to represent the space between the dollars and cents columns, and prints the period and then the number 2 and then the number 3. If the next amount to be represented is 425.03, the operator sees at a glance that the first figure, 4, is the first in the first division to the right of the mark *a*, (or in the hundreds column,) and therefore moves the carriage to bring the pointer opposite the first cipher in said division or opposite the first space at the left of the first divisional mark *a*, and then prints the figure 4, and thereafter in succession the figures 2 and 5, the period, and the 0 and 3, when it will be found that the figures are all in proper vertical position in column under the figures .23. Other numbers are printed in the same manner, the operator, seeing at a glance whether the first figure of each number to be printed is in the first, second, or third of the divisions sepa-



rated by the said marks, and whether the position of the figures in respect to the initial mark *a* is correct.

When the numbers to be separated indicate other quantities than dollars and cents, the mark *a* may be the period dividing the figure representing whole numbers from those representing fractional numbers, and when it is necessary to carry the fractional numbers beyond two places one of the supplemental marks farther to the right may be assumed as indicating the divisional point.

It will be evident that the divisions may be indicated by spaces, dots, lines, ciphers, or in any other suitable manner.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A scale for type-writers, provided with the usual graduations and with an additional mark or sign opposite every fourth graduation, dividing the scale into divisions of three graduations each, substantially as and for the purpose set forth.

2. The combination, with a type-writer, of a carriage having a pointer, a scale having the usual graduations, and a mark or sign opposite every fourth graduation, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER P. MILLER.

Witnesses:

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