No. 723,338. PATENTED MAR. 24, 1903.

W. THOMSON.

PENMANSHIP CHART.

APPLICATION FILED APR. 22, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

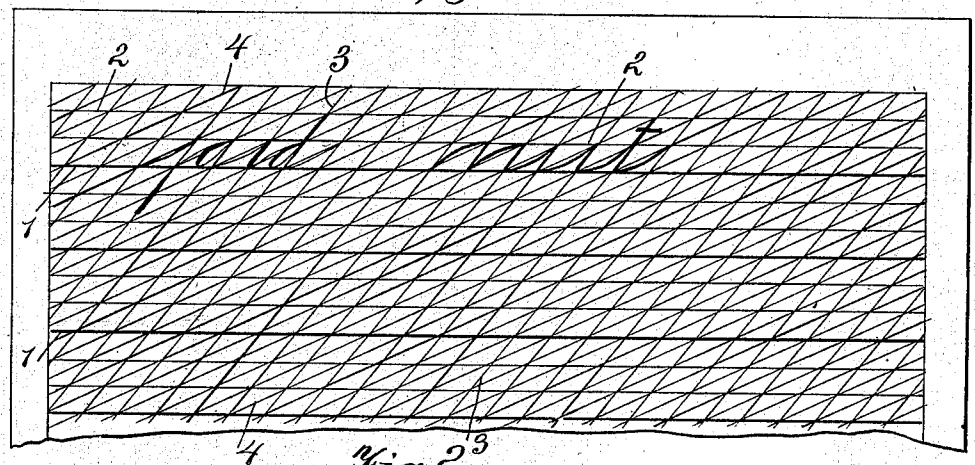


Fig. 2.

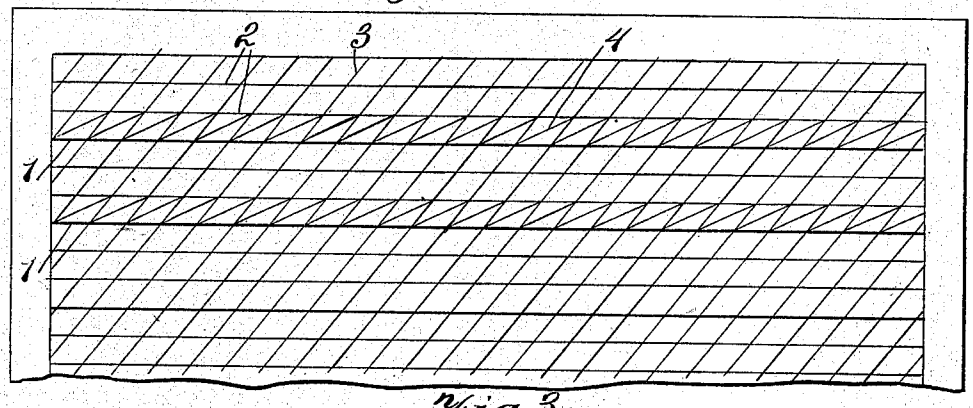
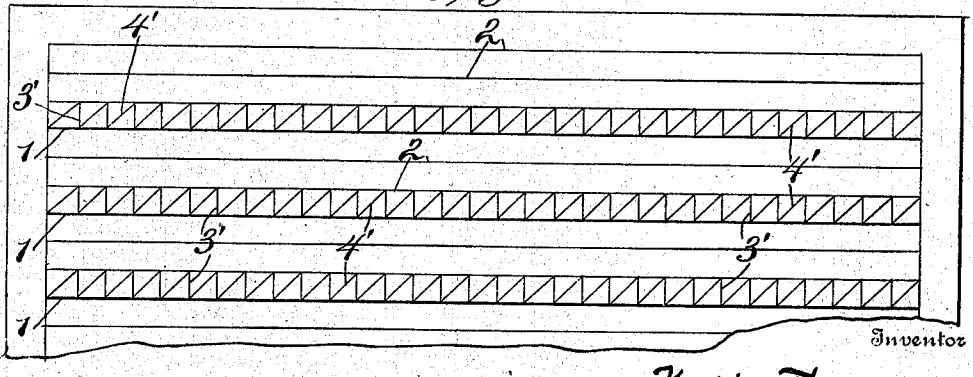


Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

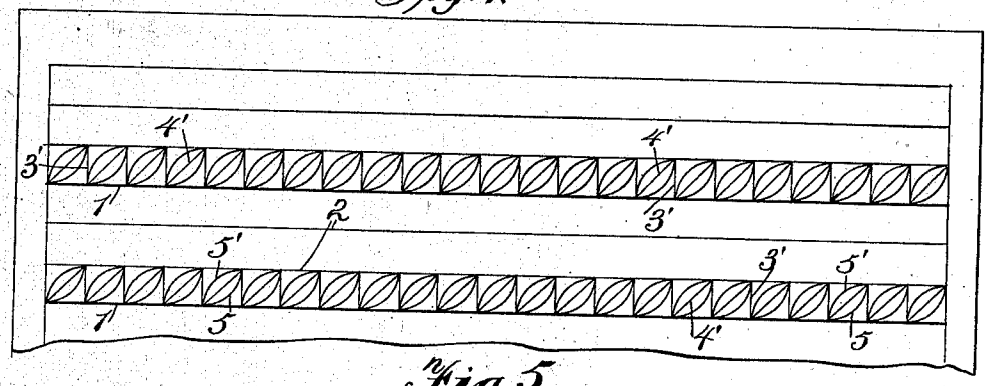


Fig. 5.

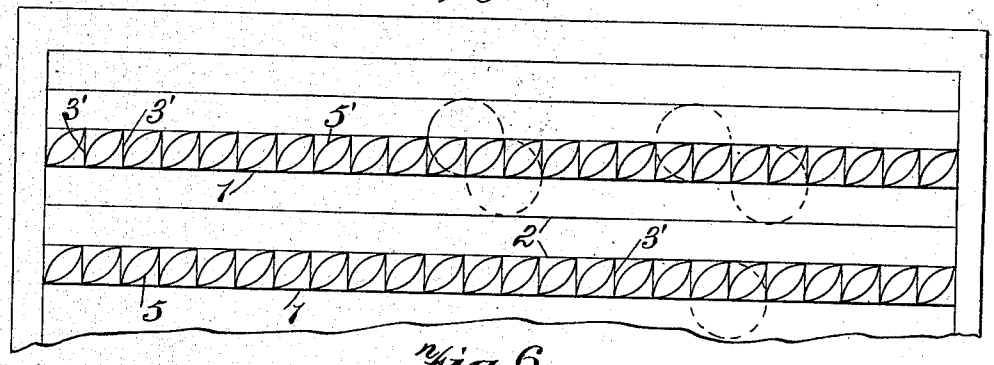


Fig. 6.

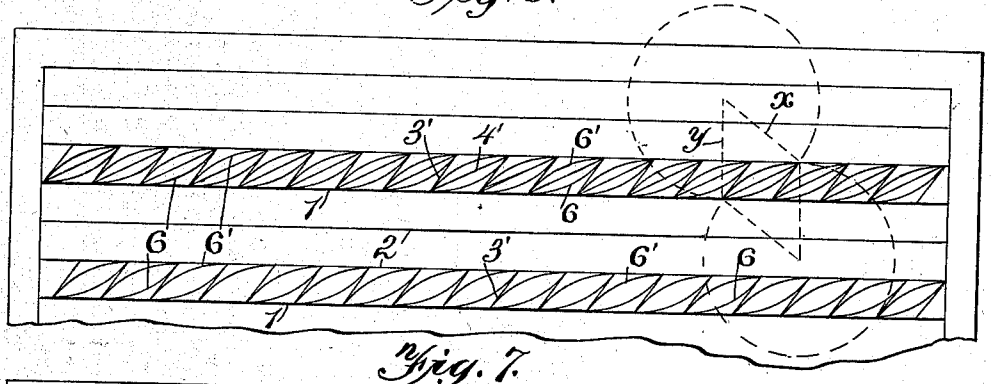
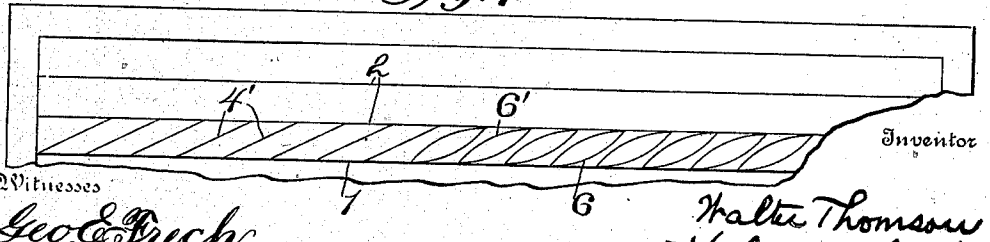


Fig. 7.



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WALTER THOMSON, OF ALBANY, NEW YORK.

PENMANSHIP-CHART.

SPECIFICATION forming part of Letters Patent No. 723,338, dated March 24, 1903.

Application filed April 22, 1901. Serial No. 56,911. (No model.)

To all whom it may concern:

Be it known that I, WALTER THOMSON, a citizen of the United States, residing at Albany, county of Albany, State of New York, have invented certain new and useful Improvements in Penmanship-Charts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in devices employed to guide or aid in the instruction of penmanship, and it more particularly relates to what might be termed a "penmanship-chart;" and the objects and nature of my invention will be readily understood by those skilled in the art in view of the following description of the examples within the spirit and scope of my invention illustrated in the accompanying drawings.

My invention consists of a sheet, leaf, or surface provided with peculiar advantageous arrangements of indicating or guiding marks or lines, combined with connective-slant guides, as more fully and particularly specified and pointed out hereinafter.

Referring to the accompanying drawings, Figure 1 represents a sheet or writing-surface provided with an arrangement of guiding or indicating lines or marks in accordance with my invention, a word and letters being written thereon to indicate the method of utilizing my improvement in the instruction of penmanship. Fig. 2 represents a sheet or writing-surface having an arrangement of indicating or guiding lines thereon in accordance with my invention, but presenting a different appearance from the arrangement illustrated in Fig. 1. Fig. 3 represents a sheet or writing-surface having an arrangement of indicating or guiding lines in accordance with my invention, the arrangement of the lines being such as to produce vertical writing when followed by the student. Fig. 4 shows part of a penmanship-chart for vertical writing provided with additional connective-slant guides, said additional guides being formed as arcs and indicating the proper curvature of the connective slants as well as the proper angle with the base-line. Fig. 5 shows part of a writing-surface or penmanship-chart adapted for vertical writing, showing each unit or initial square or space provided with the double-curved connective-slant indicating guides or lines and without the straight diagonal lines shown in previously-mentioned figures of the drawings. This view also shows the centers from which the circles are struck to properly form and locate said arcs or curved guide-lines. Fig. 6 shows part of a writing-surface or penmanship-chart adapted for slant-writing, some of the unit or initial parallelograms provided with the straight diagonal connective-slant guide-lines and also the curved guide-lines, dotted lines and circles indicating the method followed in determining the centers from which said curved guide-lines are struck, the remaining initial parallelograms of said view being shown without said straight connective-slant guide-lines, showing the double-curved guide-lines only in each of said parallelograms. Fig. 7 shows part of a writing-surface in accordance with my invention formed with equally-spaced base-lines and with connective-slant guide-lines, but without the main-slant guide-lines.

Uniform height of small letters, uniform angles, and uniform spacing of the letters and certain portions thereof and of words are the essential requirements of perfect or good handwriting.

In what is called "slant-writing" there are in the perfect copy but two angles, which, with their modifications, form the basis of all small letters. These two angles are the main slant, which is supposed to rise from the base-line at an angle of, say, about fifty degrees, and the connective slant, which is supposed to rise from said base-line at an angle exactly one-half the angle of the main slant, hence at about an angle of twenty-five degrees with the base-line, where the main slant forms an angle with said line of about fifty degrees.

It is universally conceded that the small letters "w," "m," "n," "x," "v," "i," "u," "c," "e," "o," and "a" should all be of the same height from the base-line and that taking this uniform height as the unit and terming it "one" or the "unit-space" the letters "t" and "d" should occupy two spaces—that is, the unit or first space above the base-line and a corresponding space above. The letters "l," "b," "h," and "k" should oc-

cupy three spaces above the base-line; the letters "g," "j," "y," "q," and "z" three spaces—that is, the unit-space above the base-line and two corresponding spaces below; the letter "p" three and one-half spaces—that is, two spaces above the base-line and one and one-half below—and the letter "f" five spaces—that is, three spaces above the base-line and two below the base-line.

It is an object of my invention to provide means which the penmanship student can easily and accurately follow in forming letters and words in strict accordance with the hereinbefore-mentioned requirements whereby the penmanship student in practicing the formation of letters on such a writing-surface will almost of necessity produce letters at the proper angles and of the proper relative dimensions until the proper forms of letters and words become so firmly impressed on the mind and the fingers and hand become so drilled in accurately forming letters as pictured in the mind that the student will habitually produce good writing without the aid of extraneous means or a guiding-chart.

In all the figures of the drawings the reference-numeral 1 indicates the base-lines for the several lines of writing, and 2 indicates the several intervening spacing-lines. The various lines 1 2 are all parallel with each other and equally spaced. These lines are preferably arranged horizontally across the writing-surface, forming parallel spaces all of the same width across the writing-surface.

Usually the base-lines 1 are in some way distinguished from the spacing-lines 2, either by ruling or printing the base-lines all of the same color and the spacing-lines of a different color or by distinguishing said lines in other ways. Usually two spacing-lines intervene between the base-lines, thereby forming three spaces between each base-line and the two adjacent base-lines, which include the two spaces above the unit-space on each base-line and two spaces under each base-line and above the space on the base-line next below. These base and spacing lines enable the student in practicing to attain the proper regularity and accuracy in forming letters of the proper relative heights according to the rules and requirements hereinbefore pointed out.

The base and spacing lines are arranged in practically the same manner whether the chart or writing-surface be intended for slant or vertical writing.

The space between each base-line and the first spacing-line above is taken as the unit-space and indicates the height of the small letters hereinbefore referred to, while the remaining spaces above and below the base-line are of the same width as said unit-space and cause regularity and uniformity in the vertical lengths of the remaining letters, as hereinbefore mentioned.

3 represents the main-slant indicating or guiding marks or lines. In Figs. 1 and 2, showing a penmanship-chart adapted for slant-writing, these lines 3 intersect the horizontal lines 1 2 at an angle of about fifty degrees and are inclined upwardly toward the right-hand edge of the surface or sheet. The lines 3 are parallel with each other and are all equally spaced the same distance apart as lines 1 and 2, so as to form intervening parallel inclined spaces equal in width to and intersecting the spaces between lines 1 and 2. It will thus be noted that the inclined lines 3 divide the lines 1 and 2 into parallelograms, each having two acute angles and two obtuse angles and four sides of equal length. The hereinbefore-mentioned lines are again intersected by the parallel equally-spaced inclined lines 4, so arranged as to bisect each hereinbefore-mentioned parallelogram at the acute angles thereof. These inclined lines 4 are the connective-slant indicators or guides and intersect the horizontal lines 1 and 2 at the same points where said horizontal lines are intersected by the main-slant-indicating lines 3 and form angles with the base-lines equal to one-half of the angle between said base-lines and inclined lines 3—that is, said lines 4 rise from each base-line at an angle of about twenty-five degrees where the lines 3 rise from said base-lines at angles of about fifty degrees. The lines 4 are preferably in some way distinguished from the remaining lines, either by color or method of formation. A writing-surface is thus provided divided into spaces indicating the relative vertical height and width of letters and combined with guides accurately illustrating the proper connective and main slants and which can be easily and almost intuitively followed in the proper and accurate formation of letters. In slant-writing the letters are formed in the said parallelograms erected on the base-line and having sides which rise from the base-line at the proper main-slant angle and each side of which is equal in length to the base-line of the parallelogram. Each parallelogram can constitute a unit-space as to height and also width of certain small letters, while other letters, such as "n," will occupy two of said unit-spaces, and other letters, such as "m," will occupy three of said unit-spaces. As each such parallelogram is bisected by the connective-slant line joining the horizontal lines of the parallelogram at the same points with the sides thereof, the main-slant and connective-slant indicating or guide marks or lines are exactly and properly located, so that the student has what might be termed a "frame" or "scaffolding" on which to erect or build up any letter or combination of letters in accordance with every requirement of perfect penmanship.

In Fig. 1 I show the various lines 1, 2, 3, and 4 carried unbrokenly across the writing-surface, but as such arrangement is not necessary the lines can be arranged about as shown in Fig. 2, wherein the connective-slant lines are omitted except where needed, which is in the unit-spaces erected on the base-lines.

In Fig. 3 I show my invention arranged for vertical writing, and in this arrangement the same principle is followed out in that the connective slant forms with the base-line an angle equal to exactly one-half the angle formed by the main slant with said base-line. In this last-mentioned arrangement the main-slant lines 3′ are vertical or about vertical and so intersect the base-lines as to form angles of ninety degrees therewith, while the connective-slant lines 4′ intersect the base-lines at the same points as the main-slant lines and bisect the squares formed by the horizontal and vertical lines and rise from the base-lines at angles of forty-five degrees. In this connection said square spaces are the equivalents of the parallelograms hereinbefore referred to, and I employ the term "connective slant" as broadly covering my system where adapted to either backhand, vertical, or slant writing.

The guiding or indicating means for the connective slant can consist of either straight diagonal lines or a combination of both straight and curved lines, as shown in Figs. 4 and 6. In Fig. 5 and a portion of Fig. 6 I show the said guides formed by the curved lines alone, which, as at present advised, is the preferred form of invention. These indicating or guiding arcs or curved lines 5 5′, as shown in Figs. 4 and 5, are arranged in pairs—that is, one line is concave with respect to the base-line and the other is convex with respect to said base-line—and said two curved lines have radii of the same length, and each unit-space erected on the base-line can be provided with said two oppositely-curved lines, extending from the lower left-hand corner to the upper right-hand corner thereof.

The line 5, which is concave with respect to the base-line, is struck from a center which is the point at which the right-hand side line of each square intersects the base-line, as shown by the dotted circle in Fig. 5.

The line 5′, which is convex with respect to the base-line, is struck from a center, as shown by the upper dotted circle in Fig. 5, which is the point of intersection between the left-hand side line and top line of the square. These curved lines 5 5′ not only indicate and guide the student in attaining the proper connective slant, but also guide the student in forming the up or connective strokes with the proper degree of curvature, either the convex or concave connective curve.

Where the parallelograms or unit-spaces are provided with connective-slant guides, I can employ the straight guide-lines alone, or one or more arcs or guided lines, or a combination of both curved and straight lines.

The same system of curved lines can be employed in connection with the chart for slant-writing as shown in Fig. 6. In this figure the radii of the arcs or curved lines 6 6′ are equal; but a somewhat different method is followed in determining the centers from which said arcs are struck, as shown by the dotted lines and circles in said Fig. 6. The center for the convex line 6 is found by erecting a line y perpendicular to the base-line and extending up from the point of intersection between the base-line and left-hand side line of the particular parallelogram and then erecting a line x perpendicular to the main slant and extending up from the point of intersection between the right-hand side line of said parallelogram and the top line. The center for the arc 6 is the point of intersection between said lines x and y. The center for the concave line 6′ is found in the same way below the unit-space by extending the line perpendicular to the top line downwardly from the upper right-hand corner of said parallelogram and another line downwardly from the lower left-hand corner of the parallelogram and at right angles to the main slant. The center is found at the point of intersection of said two lines. However, I do not wish to limit my invention to said centers from which said arcs are struck where devices are used in accordance with my invention employing such guides. Also, as shown in Fig. 7, I might arrange a chart within the spirit and scope of my invention without actually marking thereon the main-slant guides, but employing only the connective-slant guides, either curved or straight. The imaginary line from the upper right-hand end of one connective-slant guide to the lower left-hand end of the connective slant-guide to the right will indicate the proper main slant either in vertical or slant writing, while the location and arrangement of the connective-slant guides would indicate the proper horizontal spacing between parts of letters, letters, and words.

Material practical advantages of utility are attained by the employment of the connective-slant guide-lines, which constitute the essence of my invention and can be used with or without the main-slant guide-lines, although, as at present advised, I prefer to employ said connective-slant guides in combination with the parallelograms formed by the horizontal lines and the straight main-slant guide-lines.

The curved guide-lines of my invention show how the small letters should be formed practically throughout seventy-five per cent. of the outline thereof, while the old straight main-slant lines indicate the formation of only certain straight portions of the small letters—only about twenty-five per cent. of the outline thereof.

A writing-surface impressed with the horizontal lines and inclined parallel main-slant lines, combined with my oppositely-curved connective-slant lines, provides a guide for practically every portion of the small letters and indicates the proper angles and spacing thereof.

It is evident that various changes can be resorted to in the arrangements described

without departing from the spirit and scope of my invention. Hence I do not wish to limit my invention to the exact arrangement shown.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The penmanship-chart having parallel horizontal indications, parallel equally-spaced main-slant indications, and connective-slant indications, all said indications impressed on the writing-surface of the sheet, the connective-slant indications arranged in the parallelograms formed by the horizontal and main slant indications, substantially as described.

2. A penmanship-chart, the writing-surface of which is provided with base-lines and lines forming equal unit-spaces on the base-lines, for the purposes described, and connective-slant-indicating arcs or curved lines arranged in and approximately bisecting said spaces, as described.

3. As an article of manufacture, the penmanship-chart consisting of a sheet having its writing-surface provided with base-lines and series of similar equally-spaced pairs of oppositely-curved connective-slant guide-lines, all extending up from the base-lines at the same angle, for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER THOMSON.

Witnesses:
JOHN H. KOREMAN,
JOHN A. MCGINTY.