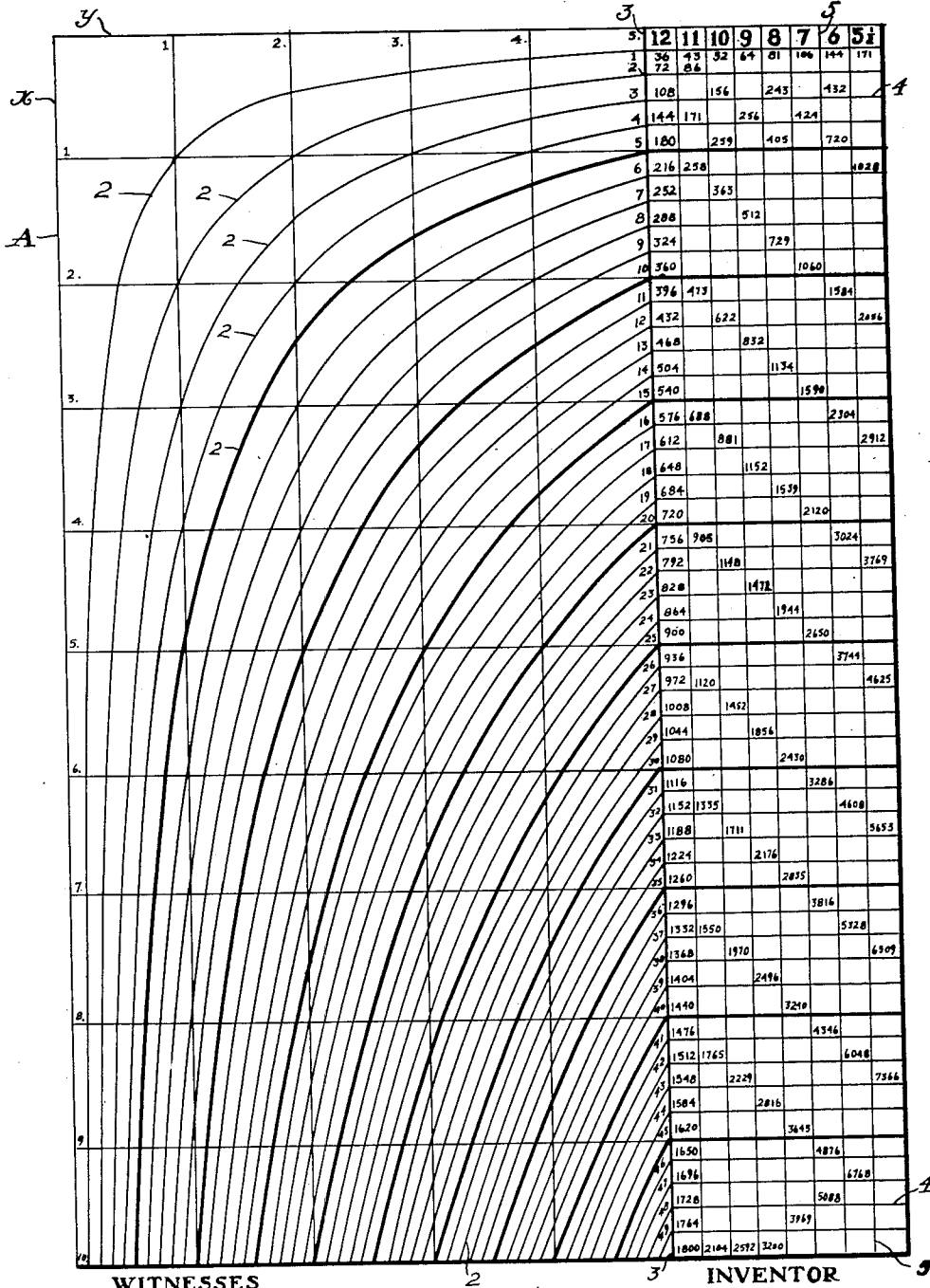


A. H. HALLORAN.
TYPE MEASURING DEVICE.
APPLICATION FILED OCT. 27, 1908.

972,528.

Patented Oct. 11, 1910.



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ARTHUR H. HALLOMAN, OF SAN FRANCISCO, CALIFORNIA.

TYPE-MEASURING DEVICE.

972,528.

Specification of Letters Patent.

Patented Oct. 11, 1910.

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To all whom it may concern:

Be it known that I, ARTHUR H. HALLOMAN, citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Type-Measuring Devices, of which the following is a specification.

This invention relates to a device for the measurement of rectangular areas, and pertains especially to a means for use in measuring type or printed matter.

The particular object of the invention is to provide a simple, cheap, practical device, particularly for use in printing shops and the like, by which the number of ems in a column may be instantly determined.

The invention consists essentially of a transparent medium bearing a series of constant product curves, namely, hyperbolas, with rectangular asymptotes.

The drawing is a plan of the invention as applied to the measurement of type or printed matter.

A represents a rectangular sheet of suitable transparent material, such as celluloid, on which are inscribed a series of constant product curves 2, namely, hyperbolas, with rectangular asymptotes.

Having reference to the drawing, x and y , represented, respectively, by the left-hand edge and top of the sheet A, are the rectangular coördinates, or asymptotes, or reference axes, of the series of hyperbolic curves 2. At any suitable distance parallel with the " x " asymptote, here represented by the left-hand edge of the transparent sheet, is drawn a marginal line 3 corresponding to the maximum width of any column to be measured; this marginal line intersecting the several constant product curves 2. These curves 2 intersect the marginal line 3 at uniform distances apart; that is to say, the several curves being arranged spacially in arithmetical series representing progressively and uniformly increasing areas.

In the application of the device for the use here contemplated, these curves are arranged with respect to the width between the edge and the marginal line 3, so that the product of the coördinates of the various curves shown would be a surface equal to one of the squares formed by the intersections of the adjoining ones of these two sets of parallel lines. That is to say, if the distance between the edge x and line 3 is five

inches, the maximum width of a column to be measured, and each curve represents one inch, if there are sixty curves there will be sixty square inches; the first curve of the series at the top corresponding to one square inch, the second to two square inches, etc. This spacial arrangement may be indefinitely multiplied, of course, and the interlinear spaces at the points of intersection of the marginal line 3, while uniform, represent multiples of one square inch, or of any other unit of measurement.

To the right of the marginal line 3 are a series of horizontal lines 4 drawn from the intersections of the various curves with the marginal line 3, and these horizontal lines are again divided by the column lines 5. Each of these columns is designated at the top according to a particular size of type, as, for example, 12-point, 11-point, 10-point, etc. In each of these columns and opposite each successive curve is shown the number of ems (or other unit of measurement) according to that particular size of type represented in the square inch, or number of square inches corresponding to the successive curves. That is to say, the topmost curve would show, under 12-point type, thirty-six ems for one square inch; the second curve of the same sized type, or two square inches, would show seventy-two ems; and so on. Consequently, knowing the size of type in which a column to be measured is printed, the number of ems in the column, or any portion of the column to be measured, is instantly determined by superposing the device on the type, or on the printed matter, so that the " x " edge of the device is at the left-hand side of the column, and the " y " edge of the device at the top of the column; the number of ems in the column being read opposite that curve which passes through the lower right-hand edge of the type to be measured.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A device for the measurement of type and the like, comprising a sheet bearing a series of constant product curves, namely, hyperbolas, with rectangular asymptotes, the area of said sheet covered by said hyperbolas being essentially rectangular, and said sheet having another rectangular area along one side of the first-named rectangular area, said second rectangular area being divided vertically and transversely into columns and

spaces, with each space corresponding to a particular hyperbolic curve, and each of said spaces showing the number of ems of a particular size of type represented in the areas
5 corresponding to the respective curves.

2. A device for graphic measurement of small rectangular areas, comprising a transparent medium bearing a series of constant product curves, namely, hyperbolas, with
10 rectangular asymptotes, said asymptotes being represented, respectively, by the top and left-hand edges of the sheet, a marginal line drawn at a predetermined distance from the left-hand edge intersecting said curves, a se-

ries of columns on the sheet at the right of
said marginal line, each column corresponding to a particular size of type, and there being represented in each column and opposite each of said curves the number of ems of that particular size of type in the areas
20 corresponding to the respective curves.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARTHUR H. HALLORAN.

Witnesses:

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