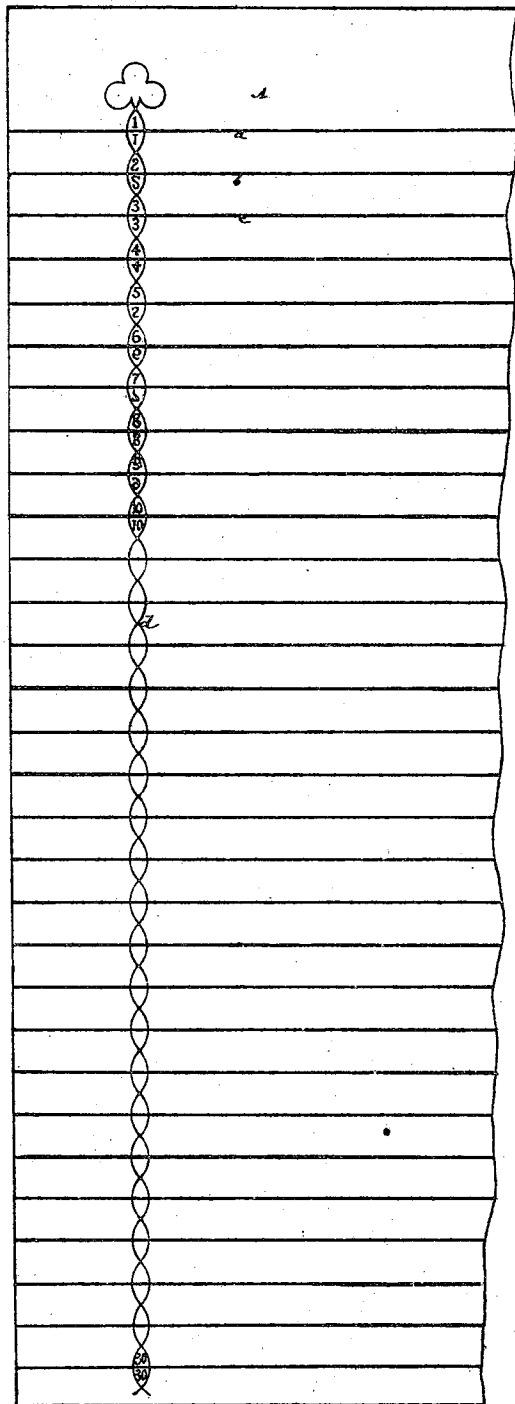


J. Langtree,
Paper Product.

No. 107,067.

Patented, Sep. 6, 1870.



Witnesses:
Fred. Hayner
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JOHN LANGTREE, OF NEW YORK, N. Y.

Letters Patent No. 107,067, dated September 6, 1870.

IMPROVEMENT IN PAPER FOR PRINTING, WRITING, AND OTHER PURPOSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN LANGTREE, of the city, county, and State of New York, have invented a new and useful Improvement in Paper for Writing, Printing, and other purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and which represents a face or outside view of a sheet of "legal cap" paper made in accordance with my improvement.

My invention, while applicable to various kinds of blank paper for writing, printing, and other purposes, both for use in a bound and loose form, it will here suffice to describe with reference to paper for manuscript use in separate sheets, as, for instance, legal cap, foolscap, and letter paper.

The main object of the invention is to economize the time, labor, and expense which has heretofore been attendant upon numbering the lines or spaces on various kinds of paper for writing, printing, and other purposes, and which has heretofore been done by writing or printing the numbers thereon at the time of using the paper.

The invention consists in pressing or water-marking the paper with the necessary numbers opposite its lines or spaces.

The invention also includes a duplicate arrangement in reversed positions of said pressed or water-marked numbers, for the purpose of numbering both sides of the page or sheet, and which is more specially applicable to paper in which the sheets are folded midway of their length or breadth.

The invention also embraces an arrangement of the numbers within a pressed or water-marked marginal line or entwining border, preferably of a wave or chain pattern, surmounted with an eagle or other suitable device, whereby the numbers are inclosed in separate spaces, to indicate their respective lines, and the usual labor and expense of ruling or printing the paper with a marginal line or lines is thereby avoided.

Referring to the accompanying drawing—

A represents the outside face of a sheet (shown only in part) of "legal cap," which may have its cross-lines *a*, *b*, and *c*, either ruled, printed, or water-marked on the paper.

Opposite these lines in the margin are the numbers, which indicate in regular numerical order the several cross-lines in succession. These numbers are formed in the paper by pressing or water-marking them therein, and may be done during the process of manufacturing, calendering, or finishing the paper by means of suitable metallic rolls, plates, or cylinders, with the numbers raised thereon, as other legible water-marks have been made in paper, and so that

the said numbers will be pressed or water-marked into the paper during the passage of the paper between the said rolls, plates, or cylinders.

The cross-lines *a*, *b*, and *c*, also the marginal line *d*, on the left margin of the paper, may also be pressed or water-marked into the paper at the same time and by the same rolls, plates, or cylinders.

In case of the marginal line *d* being pressed or water-marked into the paper, it is preferred to make said line of a wave or chain pattern, so as to form separate spaces, as it were, for inclosure of the numbers opposite their respective lines.

The line numbers may either be single or in duplicate, and if the latter, may be differently arranged, according to the fold made in the paper, the object of duplicating the numbers being to provide for writing or printing on both sides of the page, said numbers usually beginning at the top and running down to the bottom.

In the case of "legal cap," which is to be written on both sides, and which is usually folded over at the top *e*, whereby the designating numbers for both sides of the page would thus come in opposite lines, exposing them to run into or mar one another, I propose to arrange the line of numbers on the one side nearer to the edge than on the other, or to have one set of the duplicate numbers above the lines and the other below them, and to make said duplicate numbers reversed, whereby each set of numbers will be separate and distinct from the other, and be visible in proper position on the side of the page to which they respectively belong.

Said duplicate numbers may either be alike, so as to indicate count from the top of the one side of the page, and from the bottom of the other or opposite side thereof, or they may be arranged to run from top to bottom of both sides of the page.

What is here claimed, and desired to be secured by Letters Patent, is—

1. Writing, printing, or other paper, having the numbers which indicate the lines that run across its face pressed or water-marked in the margin of the paper, substantially as specified.

2. The arrangement of duplicate numbers pressed or water-marked in the margin of the paper opposite the lines or spaces in the latter, essentially as and for the purpose herein described.

3. The arrangement of the pressed or water-marked numbers, which indicate the lines in the paper, within a pressed or water-marked marginal line or border of a waved or chain-line pattern, substantially as specified.

Witnesses:

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JOHN LANGTREE.