

(No Model.)

3 Sheets—Sheet 1.

R. R. WILLIAMS.
INDEXING.

No. 471,205.

Patented Mar. 22, 1892.

Fig. 1.

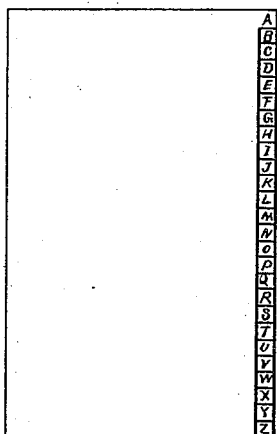


Fig. 3.

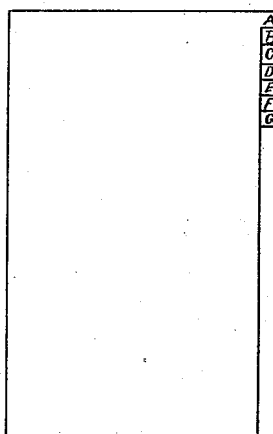


Fig. 2.

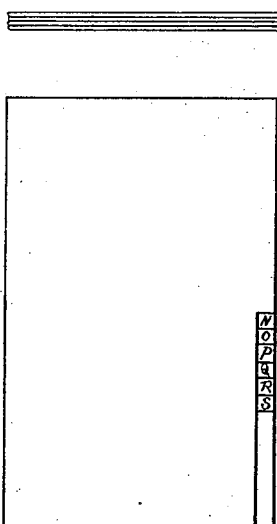


Fig. 4.

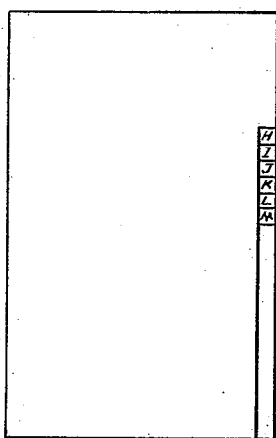


Fig. 6.

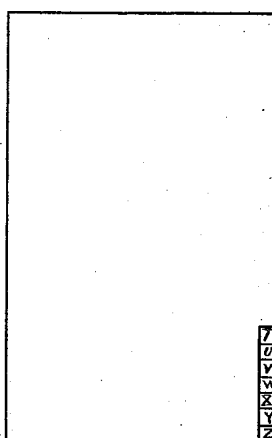


Fig. 5.

Attest:

L. Lee.
J. Van Hook Jr.

Inventor.

R. R. Williams, per
Crane & Miller, attys.

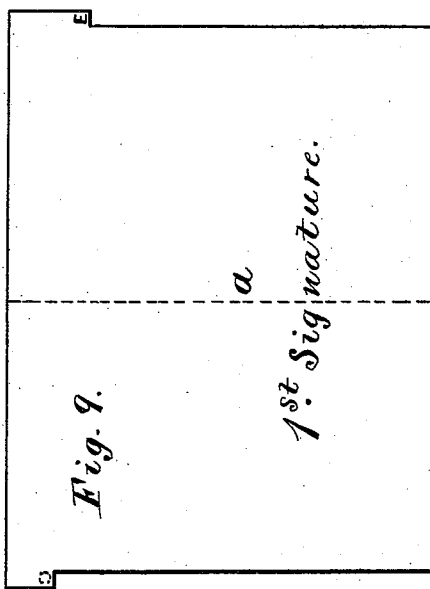
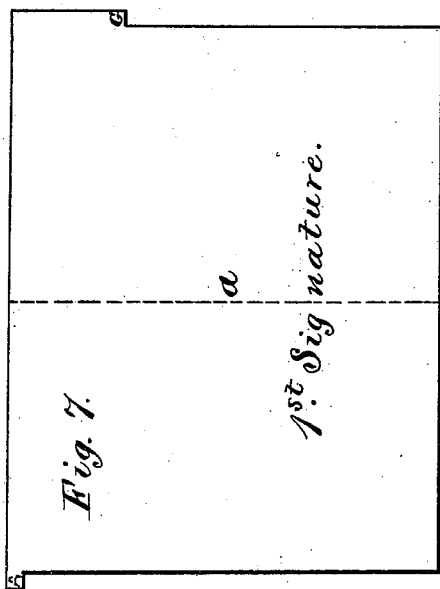
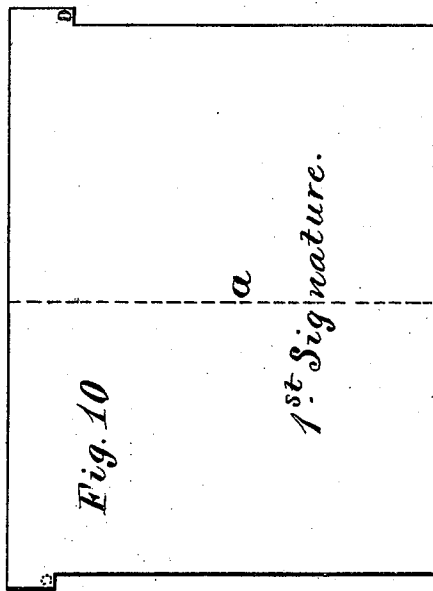
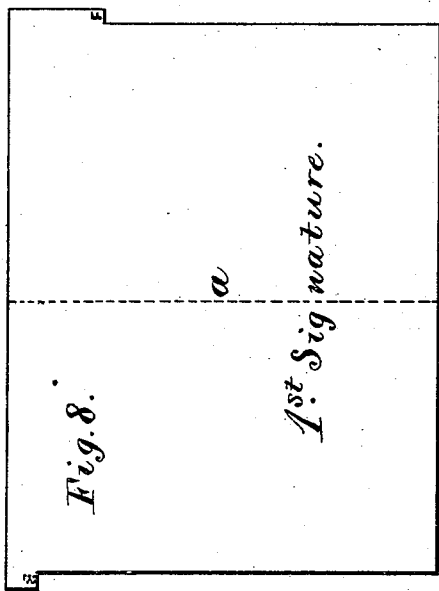
(No Model.)

3 Sheets—Sheet 2.

R. R. WILLIAMS.
INDEXING.

No. 471,205.

Patented Mar. 22, 1892.



Attest:
L. Lee.
J. Vanhulst Jr.

Inventor.
R. R. Williams, per
Crane & Miller, attys.

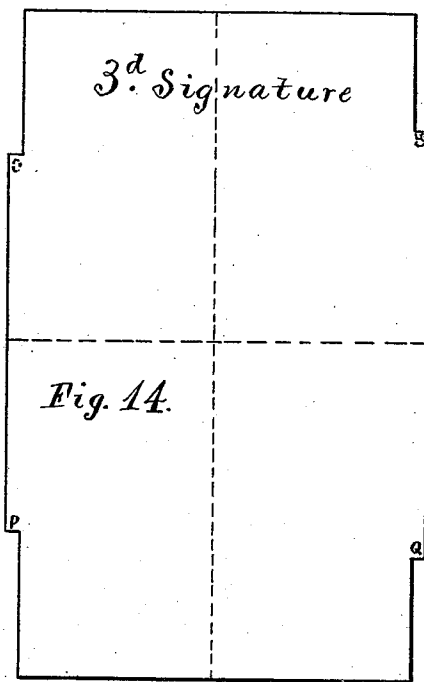
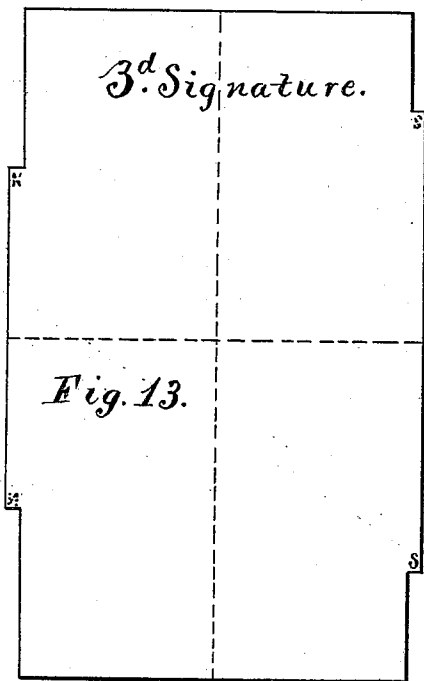
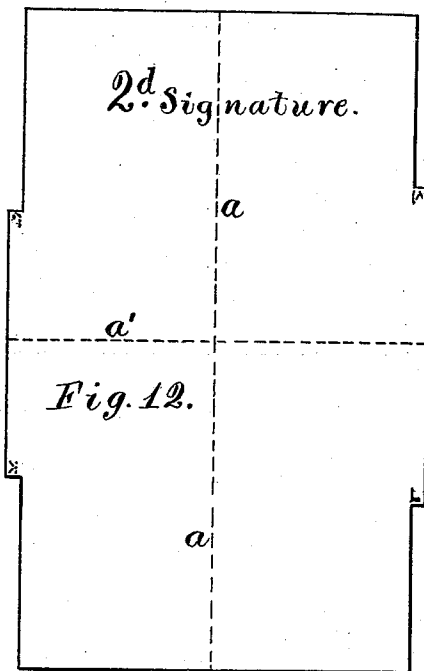
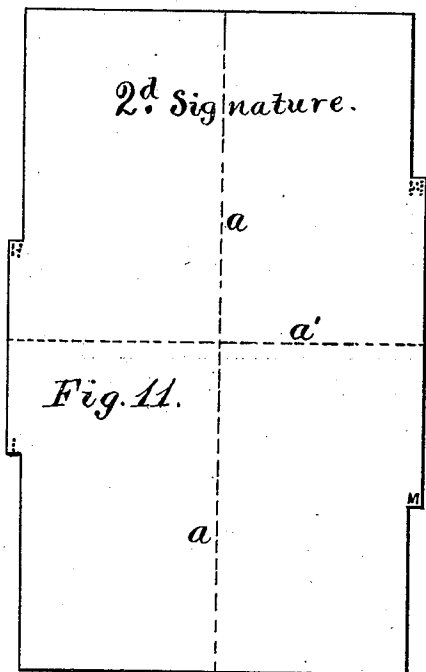
(No Model.)

R. R. WILLIAMS.
INDEXING.

3 Sheets—Sheet 3.

No. 471,205.

Patented Mar. 22, 1892.



Attest:
L. Lee.
J. Vanhest Jr.

Inventor.
R. R. Williams, per
Crane & Miller, Atty.

UNITED STATES PATENT OFFICE.

RICHARD R. WILLIAMS, OF BROOKLYN, NEW YORK.

INDEXING.

SPECIFICATION forming part of Letters Patent No. 471,205, dated March 22, 1892.

Application filed December 6, 1890. Serial No. 373,764. (No model.)

To all whom it may concern:

Be it known that I, RICHARD R. WILLIAMS, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Methods of Making a Marginal Index, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to furnish a more economical method of forming a continuous series of reference-tags upon an index containing several signatures.

The invention consists in a method of preparing the said signatures before they are secured together in the index, to present each a portion of the reference-tags at a different point upon its margin.

In carrying out my invention I notch two opposite edges only of each sheet and wholly remove the paper from the notches before the sheets are folded and thus prepare the several signatures to form a complete index when they are secured together. By this method I avoid the necessity of any hand-labor to subsequently mark and notch the edge of the index. In any case where the method of manufacture requires the sheets to be folded a number of times the middle of the sheet ultimately becomes the edge of some leaf, and it is obviously impossible with such a method of manufacture to wholly notch the edges of such leaves before the sheets are folded, as the notching would result, in some cases, in almost entirely severing the sheet into two parts.

To diminish the labor of forming the notches wholly by hand after the index is finished, it has been attempted heretofore to partly notch a series of sheets, to be afterward folded several times, bound into an index, and the paper adjacent to the notch-marks then cut out by hand. Such a method has been claimed in United States Patent No. 359,469, issued March 15, 1887, to E. C. M. Rand, and Fig. 2 of said patent shows by a diagram the apparent impracticability of notching sheets before they are folded. To avoid such notching the said Rand devised a method of partly notching the sheets and removing the paper adjacent to the notches after folding the sheets. By such a process a considerable

amount of hand-labor is required to cut out and remove the paper adjacent to each of the notch-marks, and my invention is designed to wholly avoid such labor, and I hereby disclaim such method.

By my invention I am enabled to wholly remove the paper from the notches before the sheets are folded, which I effect by forming each signature of sheets which are notched upon two opposite edges and folded parallel with the notched edges only once. With such construction the sheets can only be made to furnish two leaves or four, and are notched before folding at opposite sides only of the intended fold. The edges of the different sheets in each signature are diversely and progressively notched, the notches being calculated to form the tags at the required points in each signature. The folding of the sheets parallel with the notched edges and their subsequent arrangement in each signature then brings the tags upon the edges over one another in the desired order. The sheets for the different signatures are also notched differently from one another, so that the tags in each signature are exhibited in separate groups upon the edges of the separate signatures and in such order as to form a continuous series of tags upon the index when the signatures are properly secured together.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is a front elevation of an index with twenty-six marginal tags adapted to receive the letters of the alphabet, as shown. Fig. 2 is an end view of the same, showing four signatures placed together in readiness for sewing. Fig. 3 represents the first signature detached from the index; Fig. 4 the second signature; Fig. 5, the third signature, and Fig. 6 the fourth signature. Fig. 7 represents the outer sheet in the first signature; Fig. 8 the next sheet; Fig. 9 the next sheet, and Fig. 10 the inner sheet. Figs. 11 to 14 show modified forms of sheets adapted for folding once parallel with the notched edges and once transverse to the same.

In the annexed drawings, the tags are shown provided with reference-letters to render the arrangement of the leaves in each signature more evident, and the reference-marks may be applied to the tags before or after the sig-

natures are bound into an index, as any reference-marks which may be applied to the tags may be varied without affecting my invention.

5 I prefer to practice my invention by making each sheet of suitable size to form two leaves only and will first describe my invention in connection with Figs. 7 to 10 of the drawings, which show the sheets required to
10 form the first signature by such method.

A dotted line *a* upon each sheet indicates where it would be folded.

The invention is illustrated with four signatures of eight leaves each, thus forming
15 thirty-two leaves, which would afford an alphabetical index with twenty-six reference-letters, and extra leaves inserted where the references were likely to be more numerous, as at C, H, M, N, S, and W.

20 Figs. 11 to 14, inclusive, are drawn upon a smaller scale than the previous figures, as the sheet in each figure represents twice the area of the leaves shown in Figs. 1 to 10.

Fig. 7 shows the outer sheet of the first signature, suitably notched at two opposite
25 edges, parallel with the line *a*, to form tags for the letters A and G. Fig. 8 shows the next sheet notched to form tags for the letters B and F. Fig. 9 shows the next sheet
30 notched to form tags for the letters C and E, and Fig. 10 shows the sheet notched to form another tag for the letter C and one for the letter D. These sheets are each folded once upon the line *a*, and when suitably arranged
35 together form the first signature shown in Fig. 3, the exposed tags forming a group at the upper end of such signature.

It will be noticed that the notches upon the four sheets in Figs. 7 to 10, inclusive, are
40 formed progressively farther from the top of the sheet upon the left hand and progressively nearer to the top upon the right hand. The sheets for the other signatures, shown in Figs. 4, 5, and 6, would be prepared in a similar
45 manner by progressively notching their edges at a suitable distance from the tops of the sheets to form groups of tags at different points upon the several signatures, as indicated in the drawings at Figs. 4, 5, and 6.
50 This construction adapts them, when secured together in the proper order, to form a continuous series of reference-tags upon a margin of the index, as desired.

By the above-described construction the
55 sheets are not indented for notching in any manner at the point where the sheets are folded, yet the notches are fully formed before the sheets are made into signatures, so that the index is finished as soon as the sig-
60 natures are secured together.

Any kind of reference marks, letters, or inscriptions may be applied to the reference-tags before or after the index is completed.

It is obvious that the same advantage in fully completing the notches before the sheets
65 are folded may be secured by making the sheets twice the height, as in Figs. 11 to 14, inclusive, so that they may be folded once transversely upon the dotted line *a'* before they are folded each upon the dotted line *a*.
70 The sheets are, however, folded only once in a line parallel with the notched edges.

This method of manufacture produces the same signature with a smaller number of sheets, and at the same time avoids the formation of any notches or indentations upon
75 the folding lines.

Figs. 11 and 12 represent the sheets suitably notched upon two opposite edges only to form the eight leaves required for the second signature, (shown in Fig. 4,) and Figs. 13
80 and 14 represent the two sheets suitably notched for the third signature. (Shown in Fig. 5.)

No illustration is made of the sheets for the
85 fourth signature, shown in Fig. 6, as the method of notching such sheets would be obvious.

An essential point to be observed is the preparation of the several sheets to form the
90 tags in groups upon different portions of the several signatures, so that the signatures when combined together will afford a continuous series of tags upon the margin of the index.
95

Having thus set forth the nature of my invention, what I claim herein is—

The method herein described of making an index with a continuous series of marginal reference-tags, which consists, first, in forming
100 a series of sheets, each of suitable size, to make two or four leaves in the desired index, diversely notching two opposite edges only of each of said sheets, folding all the sheets only
105 once parallel with the notched edges, arranging the same in separate signatures with the sheets of each suitably placed to form groups of tags at different points upon the margins of the several signatures, and finally arranging
110 and securing the several signatures together to form a continuous series of reference-tags upon the margin of the entire index.

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

RICHARD R. WILLIAMS.

Witnesses:

A. O. KITTEDGE,
THOS. S. CRANE.