

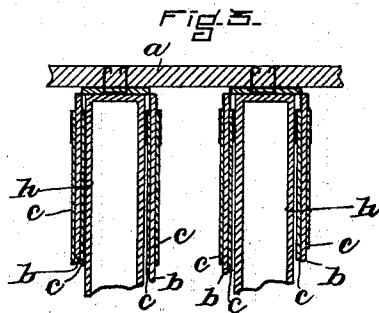
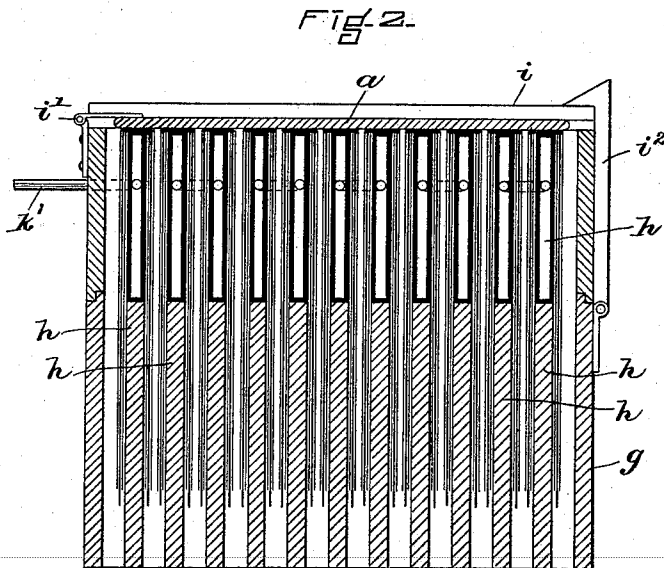
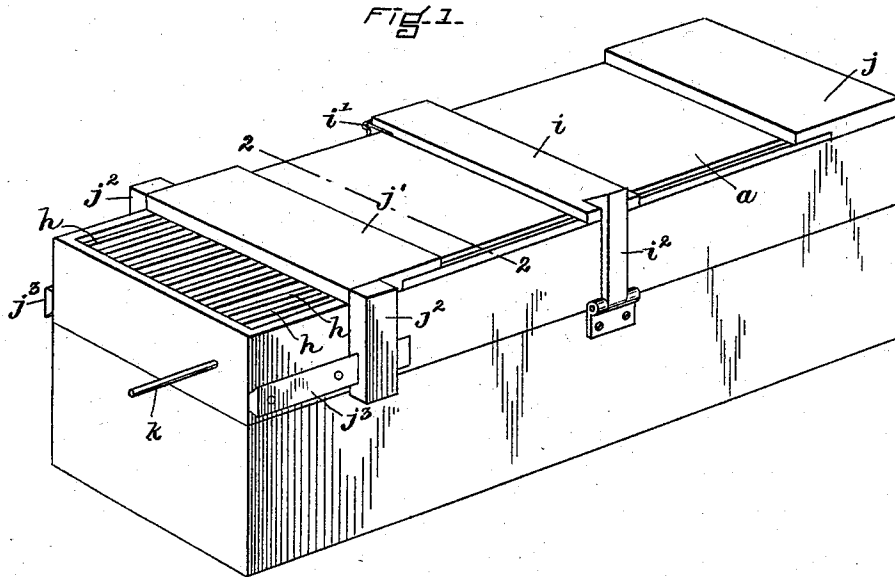
(No Model.)

2 Sheets—Sheet 1.

W. W. LE SEUR.
APPARATUS FOR MAKING INDEXES.

No. 578,935.

Patented Mar. 16, 1897.



WITNESSES.
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P. W. Pezzetta

INVENTOR.
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by Wright Brown & Leidy
Atty.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 11.

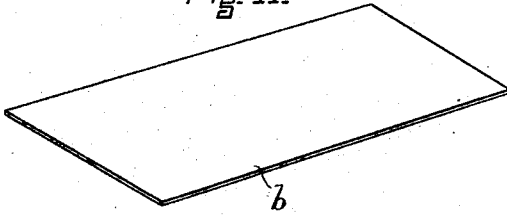


Fig. 12.

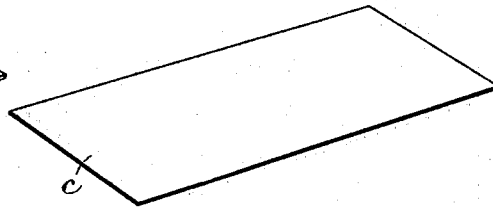


Fig. 9.

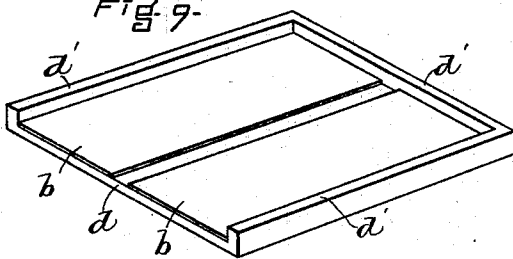


Fig. 10.

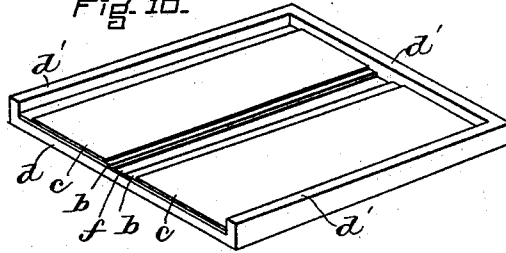


Fig. 4.

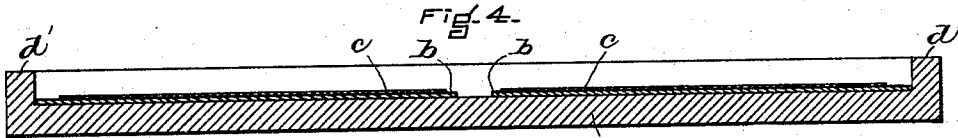


Fig. 5.

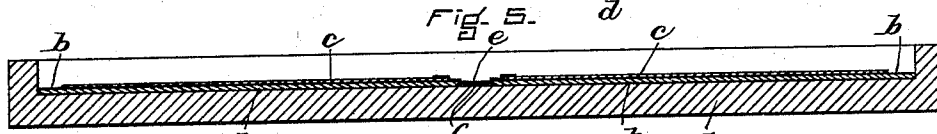


Fig. 6.

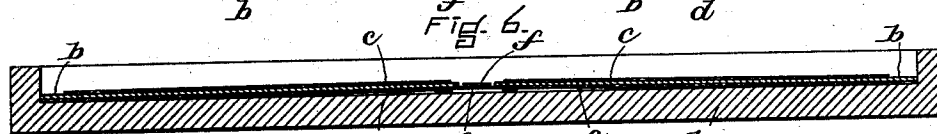


Fig. 7.

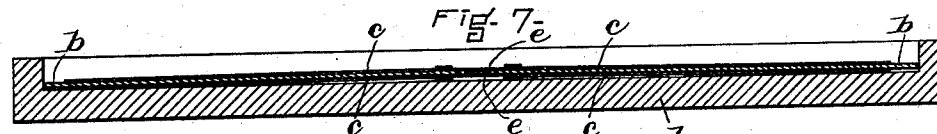
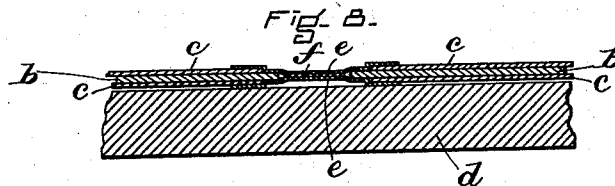


Fig. 8.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR MAKING INDEXES.

SPECIFICATION forming part of Letters Patent No. 578,935, dated March 16, 1897.

Application filed June 18, 1896. Serial No. 596,040. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. LE SEUR, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Making Indexes, of which the following is a specification.

This invention relates to indexes composed of leaves flexibly secured to a back piece which may be adapted to be mounted upon a wall or other fixed support, the leaves being arranged so that they can be conveniently turned, their pages being readily accessible, without the necessity of lifting or supporting the index by the person who is consulting it.

The invention has for its object to provide a simple, conveniently-operated, efficient apparatus for flexibly connecting the several leaves comprising the index to each other and to the base or back piece.

The invention consists in the several improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved apparatus. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents an enlargement of a portion of Fig. 2, and Figs. 4, 5, 6, 7, 8, 9, and 10 represent views showing the preferred manner of connecting the leaves to each other. Figs. 11 and 12 represent two of the leaves.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the flat back piece of an index of the character above specified.

b b represent a series of leaves which are preferably of comparatively thick and heavy paper, such as cardboard, and *c c* represent a series of intermediate leaves which are preferably thinner and lighter than the leaves *b*.

The leaves *b b* are hinged or flexibly connected to the back piece *a* at the inner edges, the connecting-hinges being separated by spaces of considerable width, so that when the leaves are all turned in one direction the outer margins of the outer pages of the leaves *b*, which are of uniform width, will be exposed. Each leaf *b* is accompanied by two of the leaves *c c*, and said leaves *c c* are con-

nected with the back piece *a* by practically the same hinge that connects the accompanying leaf *b* to said back piece, so that in the completed book or index there is first a leaf *c*, then a leaf *b*, then another leaf *c*, then a comparatively wide space, then a leaf *c*, another leaf *b*, and another leaf *c*, and so on throughout the book or index, the leaves being arranged in groups separated by spaces, each group comprising two leaves *c* and leaf *b* between them.

The apparatus hereinafter described, comprising my present invention, is adapted to uniformly connect the leaves to each other and to the back piece *a* in the order described.

In preparing the leaves for connection to the back piece I proceed as follows: I first place two leaves *b b* upon a flat bed *d*, their adjacent edges being separated by a narrow space, as shown in Fig. 4. Upon these leaves *b b* I place two of the leaves *c c*, their adjacent edges being set back from the adjacent edges of the leaves *b b*, as also shown in Fig. 4. Upon the edge of the adjacent marginal portions of the leaves *b b* and *c c* thus arranged I place the edge portions of a strip *e* of muslin or other suitable fabric coated with paste or glue, the said strip extending across the space between the adjacent edges of the leaves and being pressed down into the cavity formed between said edges, as indicated in Fig. 5, by a suitable rubbing-tool. Before applying the strip *e* I preferably insert a filling-strip *f* between the adjacent edges of the leaves *b b*, the strip *f* resting upon the bed *d*, so that when the adhesive surface of the strip *e* is pressed down into the cavity it will be pressed upon and will adhere to the filling-strip *f*, as shown in Fig. 5. I then invert the leaves *b b* and *c c*, which are now connected by the strip *e*, thus bringing the filling-strip *f* on the upper side, as indicated in Fig. 6. I then place two more leaves *c c* on the upper surface of the leaves *b b*, as shown in Fig. 6, and then place another strip *e*, having an adhesive coating, upon the edges of the upper leaves *c c*, said strip extending across the intermediate cavity and being pressed down upon the projecting edges of the leaves *b b* and upon the filling-piece *f*, as shown in Fig. 7. By this series of operations I connect two sets or groups of leaves by an intermediate back or connection, which

is adapted to be secured to the back piece *a*, said connection being composed of the two strips *ee* and the filling-piece *f*. The portions of the strips *ee* which bear upon the marginal portions of the leaves *bb* and *cc* constitute the hinges upon which said leaves swing. A suitable number of groups of leaves having been mounted or connected in the manner described, I proceed to secure them to the back piece *a*, and for this purpose I use the apparatus shown in Figs. 1 and 2. Said apparatus comprises a box or casing *g*, containing a series of vertical supports *h*, each of which is of such width and length that it will support the back or connection between two groups of leaves and permit the said groups to hang downwardly at its sides, as shown in Figs. 2 and 3. The supports *h* are separated by spaces of uniform width, their arrangement being such that when a series of connecting-backs and the accompanying groups of leaves are placed upon the series of supports the said backs will all be held in one plane at uniform distances apart and separated from each other by spaces substantially equal to the width of the backs, so that the back piece *a* may be brought into contact with all the said backs simultaneously and cemented thereto. Since the spaces between the supports *h* are closed at the ends by the ends of the casing *g*, the latter form stops or abutments, against which the edges of the leaves may be placed to insure their being in alinement. I then coat the upper surfaces of the said backs with paste or glue and place the back piece *a* upon them, as indicated in Figs. 2 and 3, and subsequently attach the same permanently by a series of rivets or studs.

The casing *g* is provided with suitable means for holding the back piece *a* firmly against the backs resting upon the supports *h* while the glue is setting or hardening. I have here shown as the holding means a cleat or flange *j*, affixed to one end of the casing and projecting over the same, so that one end of the back piece *a* may be inserted under it, as shown in Fig. 1. At the other end of the casing *g* is a similar cleat or flange *j'*, which is affixed to slides *j²j³*, fitted to move upon guides *j³j³*, affixed to the sides of the casing. After the back piece *a* has been inserted under the fixed flange *j* the flange *j'* is moved forward over the opposite end of the back piece, as shown in Fig. 1.

i represents a cross-bar which is hinged at *i'* to the casing *a* and is held at its opposite end by a swinging catch *i²*. The cross-bar *i* is arranged to bear upon the central portion of the back piece *a*.

The upper edges of the supports *h* are slightly below the level of the top of the holder or casing *g* in order that a slight space

will be provided for the connecting backs or strips between the tops of the said supports and the under surface of the back piece *a*.

The supports *h* are preferably hollow at their upper portions and adapted to receive steam or other heating medium. In Fig. 1 I show a steam-inlet pipe *k* and in Fig. 2 a steam-outlet pipe *k'*. Suitable steam connections are or may be provided between the several supports, the arrangement being such that steam entering the pipe *k* can circulate through all the supports and escape with the water of condensation through the pipe *k'*. By thus heating the supports I facilitate the operation of attaching the backs to the back piece *a*.

It will be seen that the supports, arranged as described, insure the proper spacing of the sections of the book or index relatively to each other, each pair of groups of leaves and the connecting-back being, for the purposes of this description, a section. I am enabled by the described apparatus to quickly and accurately assemble the parts of the book or index and insure uniformity in the arrangement of said parts.

The bed *d* is preferably provided with raised stops *d'*, extending along three of its edges, to guide the operator in locating the leaves, as shown in Figs. 9 and 10.

I claim—

1. An apparatus of the character specified, comprising a supporting frame or holder and a series of narrow elongated supports therein, separated by spaces adapted to receive groups of leaves, said spaces having stops or abutments at one or both ends, each support being formed to fit the back or connection between two groups of leaves, and provided with means whereby it may be heated.

2. An apparatus of the character specified, comprising a supporting frame or holder, a series of narrow elongated hollow supports therein, relatively arranged as described, and means for heating said supports.

3. An apparatus of the character specified, comprising a supporting frame or casing, a series of narrow elongated supports therein, having their upper edges below the level of the top of the holder, a fixed overhanging flange at one end of the casing, a movable flange at the other end of the casing and an intermediate cross-bar or clamp.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of May, A. D. 1896.

WILLIAM W. LE SEUR.

Witnesses:

C. F. BROWN,
A. D. HARRISON.