Feb. 15, 1927. 1,617,446

F. P. GORIN

THUMB INDEX

Filed May 17, 1923 2 Sheets-Sheet 1

Fig. 1.

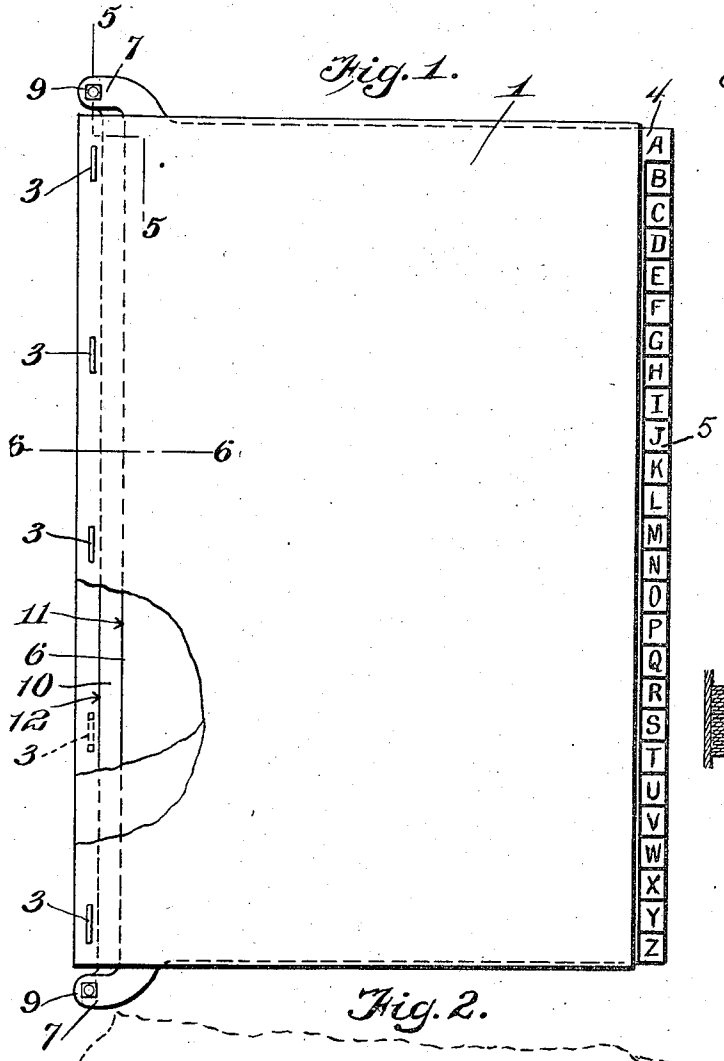


Fig. 2.

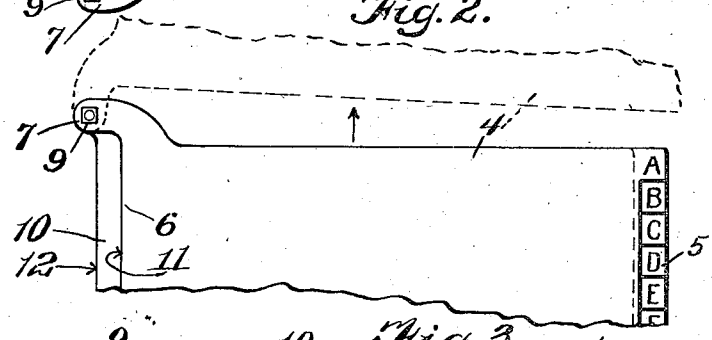


Fig. 3.

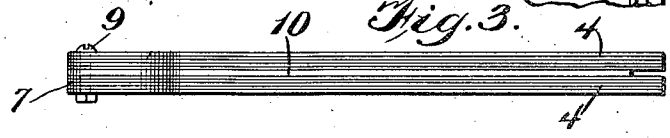


Fig. 5.

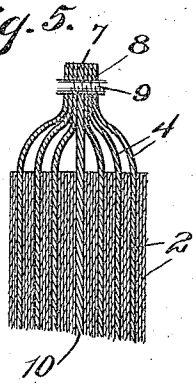


Fig. 6.

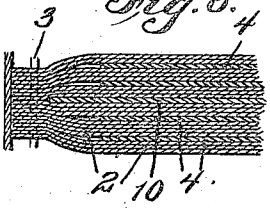


Fig. 7.

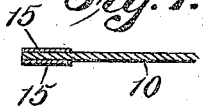
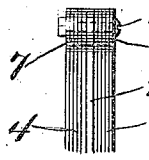


Fig. 4.



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Fig. 8.

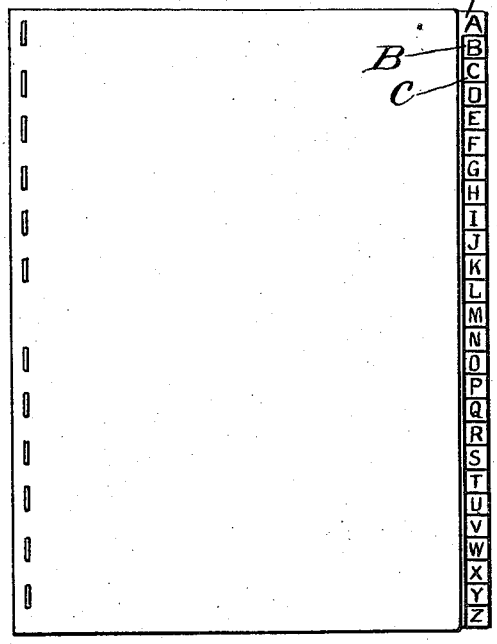
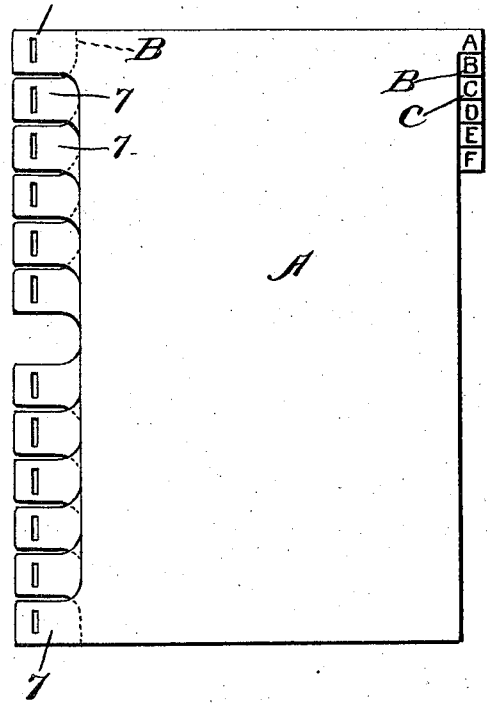


Fig. 9.



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UNITED STATES PATENT OFFICE.

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THUMB INDEX.

Application filed May 17, 1923. Serial No. 639,650.

This invention relates to improvements in book binding, and more especially to the binding together of independent thumb indexed leaves which are insertable between the leaves of a main book, such for example, as a telephone directory or the like, wherein the utmost cheapness of book construction is necessary and the addition of a thumb index is not ordinarily possible in the original book on account of the added expense, but wherein the provision of some form of thumb index is highly desirable to the user of such books or directories. In a cut-in form of thumb index, involving a series of thumb recesses cut into the outer edges of the leaves of the book, toughness of the paper is a necessary requirement because the pages directly beneath the thumb recesses obviate the necessity of lifting or handling a single sheet at a time when turning to a particular alphabetical section of the book. In a form of overlapping or stepped thumb index, toughness of the paper is necessary because in that case the projecting edges of the sheets are often handled singly and if the paper be too light or thin, the sheets are apt to tear.

My present invention contemplates the use of an overlapping or stepped form of thumb index rather than the recessed form, although either form of index could be constructed and used in accordance with the general scope and spirit of the invention.

In the drawings:—

Figure 1 is a plan view illustrating the invention, showing the index in applied position in a complete book, parts being broken out.

Figure 2 is a plan of a portion of the improved index.

Figure 3 is a top edge view of the same.

Figure 4 is a side edge view of the same.

Figure 5 is a section on line 5—5 of Figure 1.

Figure 6 is a section on line 6—6 of Figure 1.

Figure 7 is a sectional view of a modified detail.

Figure 8 is a plan of a modification.

Figure 9 is a plan of the modified index.

Referring now more particularly to the drawings, reference numeral 1 indicates the cover of an ordinary book, such as a telephone directory; 2 indicates the leaves of the book; 3 the usual wire staples which bind together the inner edges of the leaves; 4 the index leaves which have tabs or extensions 5 overlapping or stepped in the usual manner of thumb indexes. The index leaves are cut out at their inner or bound edges, as indicated at 6, leaving the legs or extensions 7 at each end of the index leaves. The legs are perforated at 8 to receive a rivet or screw 9 which serves to tightly bind together the extremities of the legs 7. 10 indicates a master sheet which is preferably located at about the center of the group of index leaves, it being understood that the master sheet is also perforated to receive the rivet 9, so that all of the thumb index leaves and the master sheet are securely bound together by rivets, and the inner edges 11 of the index leaves proper are always held in spaced relation with respect ot the inner edge 12 of the master sheet. The index leaves, together with the master sheet therefore forms a bound book in themselves separate and distinct from the main book or directory. As above indicated, it is necessary that the index leaves be sufficiently tough and strong to withstand the usual thumbing or handling of the tabs 5. If paper sufficiently thick to meet these requirements be used, the combined thickness of the index leaves when bound together would approximate the combined thickness of the leaves of the main book itself: for example, a telephone directory of about the usual construction having 320 pages, is five-eighths of an inch thick, and a group of index leaves, one for each letter of the alphabet, of 3-ply cardboard, each about 15/1000″ thick, is 7/16″ thickness. If, therefore, the group of index leaves of 3-ply stock were laid in between the leaves of the main book with the inner edges of the index leaves thrust snugly against the binding staples 3, the staples would be strained and quickly broken with use, and besides this, the outer edges of the main book would be kept flared apart to such an extent that the main book would be too cumbersome and unwieldy. Furthermore, the presence of a group of index leaves would render the action of the leaves of the main book so stiff and unyielding that the book could not be sufficiently opened to expose the reading matter upon any one of the leaves of the main book. This would be true whether the relatively thick index leaves

were originally bound to the main book or whether they were removably placed between the leaves afterwards. In other words, the mere binding together of a group of 26 index leaves of sufficient thickness to successfully withstand their necessary use as index leaves, renders impossible the complete opening of the leaves of the main book about the center represented by their bound edges, without breaking the index leaves.

In my improved construction, this stiffness of the leaves at or near their common pivot or turning l ne is diminished to such an extent that the leaves of the book can be easily turned about their common center and the index leaves will turn with them about the center represented by the rivets 9, because the legs 7 are relatively pliable, which would not be so if it were not for the cut-out portions 10. The master sheet is, of course, thrust firmly in between the leaves of the main book and snugly up against the bind ng staples 3, which causes the master sheet to be gripped firmly along its inner edge, but does not appreciably increase the thickness of the main book at or near its bound edge. Neither does the presence of the master sheet appreciably strain the binding staples. The master sheet being thus held in vise-like action between the leaves of the ma n book and the index leaves all being joined to the master sheet by the rivets 9, displacement of any of the index leaves with respect to the main book is prevented.

It will be noted that the pivotal center for the index leaves represented by the rivets 9 is substantially in alignment with the pivotal or bound center of the leaves of the main book. It will, also, be noted that while the pivotal center of the index leaves is about coincident with the similar center of the leaves of the book, yet these two pivotal centers are separate and distinct from each other and that the pivotal centers of the index leaves are outside the boundaries of the leaves of the main book. The index leaves are quickly insertible in place between the leaves of the main book and as quickly removable therefrom. To insert the set of index leaves, I remove one of the screws 9 and loosen the other screw sufficiently to allow the index leaves to freely move in a pivotal action around it. I then lay the group of index leaves in the position as shown in Fig. 4, the upper or lower hook 7 as the case may be having been positioned in line with the binding of the book, open the main book and lay over the same, turn to the first letter of the alphabet and then swing the corresponding leaf of the index group about its center screw 9 in the direction of the arrow, until the first leaf is moved into its dotted position and then back again into place in the book. I then turn the leaves of the main book to the next letter of the alphabet in the same manner swinging the next index sheet into place, etc., until all the index sheets are inserted, and so on until the master sheet is reached, which is swung around in the same manner and forced firmly in between the leaves of the book, after wh ch the remaining index leaves are swung into position. The screw 9 which was at first loosened, is now tightened up and the other screw put into position and also tightened. The book can now be roughly handled and vigorously shaken without any displacement of any of the index leaves with respect to the book.

While I have shown the supplemental index leaves as removably insertible between the fixed leaves of the book, t will, of course, be understood that the index leaves may be permanently bound in the original construction of the book, in which case the legs 7 would preferably be in staggered relation, and the binding staples 3 would pass through the legs 7 and on through all the other leaves of the book, as plainly shown in Fig. 9, in which construction there is a leg 7 at each extreme end of the initial index sheet A, a leg 7 spaced away from each end of the sheet B a distance equal to the width of the legs 7 on the sheet A, sheet C having its legs 7 still further away from the ends of the sheet a distance equal to the combined width of the legs 7 upon the sheets A and B, etc.; the result of which would be that the thickness of the bound edges would probably not be increased by more than three or four thicknesses of any one of the index leaves. The index leaves are, of course, much heavier and thicker than the other leaves of the book, because they have to withstand the general abuse of the thumb index, and th s stability of the index leaves must be present in the construction. The principle of the invention, therefore, covers a supplemental group of index leaves, either bound into the book originally or insertible thereafter.

If desired, means may be provided to assist in holding the master sheet 10, and also the index leaves 4 in place in the book. For example, the inner or projecting edge portion 12 of the master sheet and the adjacent edge portions of each of the index leaves may be roughened to provide increased frictional engagement with the leaves of the book. This roughening may be inherent, or as indicated at 15 in Fig. 7 may be provided by securing to such edge portions of the master sheet or index leaves, or both, a thin section of roughened material, as sandpaper. Thus the frictional grip between the parts is materially increased.

What I claim is—

1. The combination with a book, of a set

of supplemental leaves insertible between the leaves of the book, means for binding the supplemental leaves together, and means carried by the supplemental leaves and adapted to be inserted between the bound leaves of a book to thereby hold the supplemental leaves in position in the book, appreciably increasing the thickness of the book along its bound edge when the supplemental leaves are in place.

2. The combination with a book, of a set of supplemental, relatively thick leaves insertible between the leaves of the book, means for binding the supplemental leaves together, and means carried by the supplemental leaves and adapted to be inserted between the bound leaves of the book to thereby hold the supplemental leaves in position in the book, appreciably increasing the thickness of the book along its bound edge when the supplemental leaves are in place.

3. The combination with a book, of a set supplemental leaves insertible between the leaves of the book, and means carried by the supplemental leaves and adapted to be inserted between the bound leaves of the book to thereby hold the supplemental leaves in position in the book, increasing the thickness of the book along its bound edge when the supplemental leaves are in place.

4. The combination with a main book, of a set of supplemental leaves insertible between the leaves of the main book, means for joining the supplemental leaves fixedly together and means for holding the inner edges of the supplemental leaves in spaced relation with respect to the bound edge of the main book.

5. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, means for joining the supplemental leaves together for pivotal action about a center located beyond the book, which is approximately in alignment with the pivotal center of the leaves of the book.

6. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, means for joining the supplemental leaves together for pivotal action about a center located beyond the book, which is approximately in alignment with the pivotal center of the leaves of the book, and means for holding the supplemental leaves in spaced relation with respect to the bound edge of the book.

7. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, means for joining the supplemental leaves together for pivotal action about a center located beyond the book, which is approximately in alignment with the pivotal center of the leaves of the book, means for holding the supplemental leaves in spaced relation with respect to the bound edge of the book, and means for preventing displacement of the supplemental leaves with respect to the book.

8. The combination with a book, of a set of supplemental indexed leaves insertible between the leaves of the book, means for joining the supplemental leaves together for pivotal action about a center located beyond the book, which is approximately in alignment with the pivotal center of the leaves of the book but outside and beyond the boundaries of the leaves of the book, and means for holding the supplemental leaves in spaced relation with respect to the bound edge of the book.

9. The combination with a book, of a set of supplemental indexed leaves insertible between the leaves of the book, means for joining the supplemental leaves together for pivotal action about a center located beyond the book, which is approximately in alignment with the pivotal center of the leaves of the book but outside and beyond the boundaries of the leaves of the book, and means including a master sheet for holding the supplemental leaves in spaced relation with respect to the bound edge of the book.

10. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, a member adapted to be inserted between the bound leaves of the book for securing the supplemental leaves in place, and means for joining the supplemental leaves together for pivotal action independent of the pivot line of the leaves of the main book, and means insertible in the bound edge of the book for holding the supplemental leaves against displacement with respect to the main book.

11. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, and means wholly free of connection with the bound edge of the book for joining the edges of the supplemental leaves together, including legs on the supplemental leaves which extend beyond the boundaries of the book.

12. The combination with a book, of a set of supplemental leaves insertible between the leaves of the book, legs upon the supplemental leaves which extend beyond the boundaries of the book, means for joining the legs together at a point substantially in alignment with the binding of the book, and a member connected with the supplemental leaves and adapted to be frictionally engaged in the bound edge of the book, said member holding the supplemental leaves in place in the book.

13. A supplemental series of index leaves bound together with the edge portion of one of such leaves projecting beyond the adjacent edges of the remaining leaves to form a se-

curing means for such series of leaves when inserted between the bound edges of a complete book.

14. A supplemental series of leaves bound together with the edge portion of one of such leaves projecting beyond the adjacent edges of the remaining leaves to form a securing means for such series of leaves when inserted between the bound edges of a complete book, and means for rendering such projecting edge portion rough.

15. A supplemental series of leaves bound together with the edge portion of one of such leaves projecting beyond the adjacent edges of the remaining leaves to form a securing means for such series of leaves when inserted between the bound edges of a complete book, and a strip of sandpaper secured on such projecting edge portion.

16. A supplemental series of leaves bound together with the edge portion of one of such leaves projecting beyond the adjacent edges of the remaining leaves to form a securing means for such series of leaves when inserted between the bound edges of a complete book, and a strip of sandpaper secured on such projecting edge portion and on the adjacent edge portions of the remaining leaves.

17. A supplemental series of bound leaves for insertion as a unit in a complete book, one of said leaves projecting beyond the adjacent edges of the remaining leaves to form temporary binding connection between such supplemental series of leaves and the complete book, the remaining leaves being connected together at points disposed wholly beyond the complete book when the supplemental leaves are held in position in such complete book by the projecting leaf.

18. A supplemental bound book for insertion as a unit in a complete bound book, one of the leaves of the supplemental book providing a temporary binding connection between the supplemental book and bound book.

19. A supplemental bound book for insertion as a unit in a complete book, one of the leaves of the supplemental book adapted to engage the binding of the complete book to temporarily secure the supplemental book in place.

20. A supplemental bound book for insertion as a unit in a complete book, one of the leaves of the supplemental book adapted to engage the binding of the complete book to temporarily secure the supplemental book in place, with the remaining leaves of the supplemental book wholly free of the binding of the complete book.

In testimony whereof I affix my signature.

FREDERICK P. GORIN.