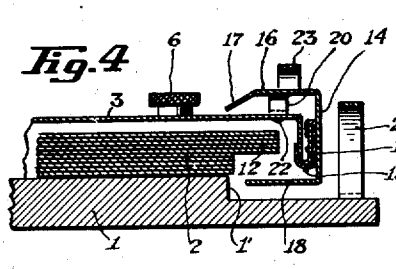
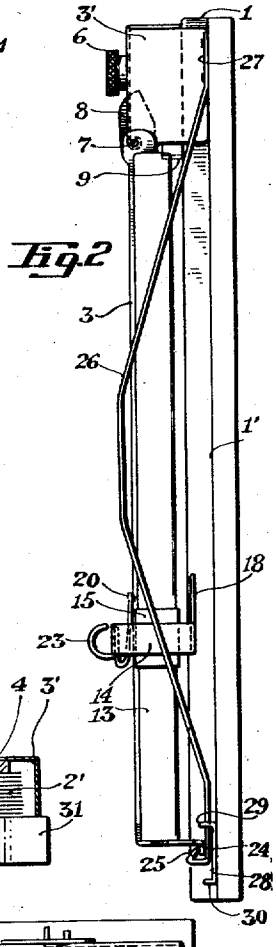
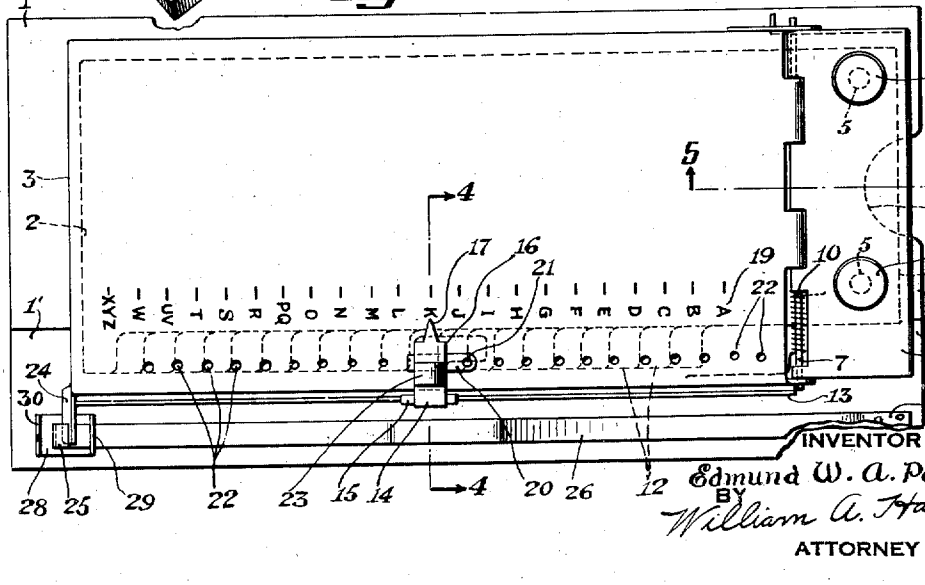
April 26, 1938. E. W. A. PETER 2,115,537

INDEX DEVICE

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INVENTOR

Edmund W. A. Peter

BY

William A. Hardy

ATTORNEY

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INDEX DEVICE

Edmund W. A. Peter, Vancouver, British Columbia, Canada

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22 Claims. (Cl. 40—104)

My invention relates to index devices such as telephone and other directories, calendars, listers, registers, recipe indexes, radio station indexes, etc., and is more particularly directed to that type of index device comprising a stack or pile of superimposed sheets which are alphabetically or otherwise suitably indexed and are so associated that they are adapted to be opened up or separated, as, for example, in a manner similar to the pages of a book or of a loose-leaf binder, to render available any desired sheet or section of the device.

The principal object of my invention is to provide in an index device of this character an improved construction whereby any desired section or sheet of the device may be accurately and very quickly and readily made available for reference or the entry of items.

Another object of my invention is to provide such an index device wherein the superimposed sheets are adapted to be opened or separated automatically at any desired place which may be selected with the device in closed condition.

A further object of my invention is to provide in an index device of the character described and wherein the superimposed sheets are relatively fixed at one end portion, an improved construction and arrangement whereby the movement of any number of the sheets with respect to the rest required to open or separate the said sheets at a desired point may readily be effected without the sheets appreciably interfering with or resisting such movement.

A still further object of my invention is to provide a device of this character which is simple in construction, economical to manufacture, and highly effective in attaining the above indicated desired results.

Other objects and features of my invention will be hereinafter described and set forth in the appended claims.

For a clearer understanding of my invention attention is directed to the drawing which accompanies and forms part of this specification and in which:

Figure 1 is a perspective view, partly broken away, of a preferred form of my improved index device with the cover thereof in raised or open position;

Figure 2 is a view in side elevation of the index device shown in Fig. 1, with the cover thereof locked in its lowered or closed position;

Figure 3 is a plan view, partly broken away, of the index device shown in Figs. 1 and 2, with the cover locked in its closed position; and

Figures 4 and 5 are fragmented sectional views taken on lines 4—4, and 5—5 respectively of Fig. 3.

That embodiment of my invention shown in the drawing is an alphabetical index device adapted for various uses, such, for example, as a telephone or other directory. This index device comprises a rectangular base or support 1 having mounted thereon for swinging movement with respect thereto a stack of similar superimposed thin flat rectangular members 2, preferably in the form of cardboard or paper sheets, and a rectangular flanged cover 3 which when in its lowered closed position, overlies the said flat members or sheets. The cover 3 is provided with a flanged end section 3' which overlies the rear end portion 2' of the stack of sheets 2, and disposed between the said cover section 3' and the uppermost sheet 2 is a fairly thick and rigid rectangular spacing member or bar 4. Screw-bolts 5 which extend through the support or base 1, the rear end portions 2' of sheets 2, bar 4 and cover section 3', and knurled nuts 6 threaded onto the upper end portions of the screw-bolts constitute means serving to secure the said rear end portions, bar and cover section fixedly but removably to the base.

The cover 3 is pivotally connected to the cover section 3' by a rod 7, being thus mounted on the base or support 1 for swinging movement relative thereto towards and away from the same. Movement of the cover 3 upward and away from the support 1 is limited by suitable means such, for example, as a rearward extension 8 provided on one side flange of the cover and a laterally projecting portion 9 which is provided on the corresponding flange of the cover section 2 and lies in the path of the said extension 8 so as to be engaged thereby when the cover is in its fully raised open position, as shown in Fig. 1. The cover is suitably biased to such raised or open position as by a tensioned coiled spring 10 disposed about the pivot rod 7 and having its ends respectively extending beneath and bearing against adjacent portions of the cover and cover section 3', as clearly shown in Fig. 3.

Each of the sheets 2 is provided with a permanent transverse crease or fold 11 between the main and rear end portions thereof whereby such main portion of the sheet is connected to the support or base 1 for swinging up and down movement relative thereto about the line of said crease. The creases 11 are parallel to the pivot rod 9 and are located adjacent thereto and slightly forwardly thereof. However, and this is

an important feature of my invention, the said creases 11 from the uppermost to the lowermost sheets 2 of the stack are respectively disposed at progressively increasing distances forwardly of rod 9, as illustrated in Figs. 1 and 5. By reason of this feature each of the sheets 2 is adapted to swing freely about the line of its crease 11, and such number of the sheets as may be required to open or separate the stack at any point where it may be desired to refer to an item already entered or to enter a new item, can be simultaneously moved upwardly about their creases without resultant deformation of any of the sheets so moved and without any tendency for the sheets to so interfere with each other as to appreciably resist or oppose the free swinging movement thereof.

The sheets 2 are of a width somewhat less than the support 1 and are attached to the latter with one side edge portion thereof overlying a rectangular recess 1' which is provided in the upper face of the support and extends along one side edge portion thereof. As shown in Fig. 1, the edge portions 12 of the sheets 2 which project over the recess 1', are cut back from their rear edges in amounts which progressively increase from the uppermost to the lowermost sheets, such edge portions 12 thus being of different and progressively decreasing lengths with the shortest such edge portion on the bottom sheet.

The sheets 2 are also slightly less in width than the flanged cover 3 so that when the latter is in its lowered or closed position it will substantially enclose the stack of sheets, as shown in Figs. 2 and 3. The cover 3 is preferably formed of sheet metal and has the side flange thereof which lies adjacent the edge portions 12 of sheets 2, when the cover is closed, turned back on itself to provide a guideway 13. A member 14 has a shoe portion 15 engaging the guideway 13 and is thereby slidably mounted on the guideway for movement lengthwise of the cover. The member 14 is provided with an upper portion 16 which extends inwardly over the top of the cover 2 and terminates in a pointer or indicator 17. Member 14 also has a lower inwardly extending portion or hook 18 which is adapted for selective coaction with the portions 12 of sheets 2 and which, when the cover is closed, lies within the recess 1' of support 1 at a level slightly below the bottom sheet 2 of the stack. The pointer 17 is adapted to cooperate with a suitable index 19 such, for example, as the letters of the alphabet, which is applied to and extends longitudinally of the cover adjacent the path of movement of said pointer. The sheets 2 also preferably bear index characters which from the top to the bottom of the stack, respectively correspond to the characters of the index 19 on the cover, that is, in the device illustrated, the uppermost sheet bears the letter A, the next sheet the letter B, and so on to the lowermost sheet, which bears the letters X, Y and Z.

Secured to the member 14, is a spring arm 20 having at its free end a detent 21 which is biased towards the cover 2 and is adapted to coact with a series of indentations 22 provided in the cover to yieldingly and releasably lock said member in adjusted position. A suitable handle 23 may also be provided on member 14 to facilitate adjustment of the latter.

Suitable means is provided for automatically effecting the releasable locking of the cover 2 in its lowered or closed position against the action of spring 10, upon movement of the cover to such position, this means preferably being of such construction that the cover may readily be released to effect automatic upward or opening movement thereof and of such of the sheets 2 as may be operatively connected thereto by member 14, under the action of spring 10. This means, as shown, comprises a detent 24 on the cover 2, which may conveniently be formed integrally with the front flange of the cover, and a spring biased latch 25 with which said detent coacts. The latch 25 which has an upper inwardly inclined surface, is preferably carried by or formed on the free end of a spring 26 which is suitably secured at its other end to the support 1, as indicated at 27. That form of the spring 26 shown is bowed upwardly between its ends and extends longitudinally of the support in a position adjacent and substantially parallel to the guideway 13 of cover 3, when the latter is in its lowered closed position, and with the latch 25 normally located, under the biasing action of the spring, in operative relation with respect to the detent 24 of the cover. The free end portion of spring 26 loosely engages a guide slot formed in a struck-up end 28 of a member 29 secured to the support 1 adjacent its front end. The other end 30 of member 29 is also struck up and forms a stop to limit the forward movement of latch 25 when the bowed spring 26 is flexed downwardly. At its rear end the base 1 may be provided with a suitable notch 31 to facilitate the separation of the stack of sheets 2 and cover 3 from the support 1, after removal of bolts 5, when it is desired to do so for the replacement of any of the sheets or for any other purpose.

The operation of that form of index device illustrated herein, is believed to be obvious but may be briefly described as follows: When the cover 3, as shown in Fig. 1, is in its raised open position, and is then swung down against the action of spring 10 to its closed position, the detent 24 engages the upper inclined surface of latch 25 to force the latter outwardly against the action of spring 26; and after the detent has cleared the said inclined surface, the latch snaps into engagement therewith and thus automatically effects the locking of the cover in its lowered closed position, as shown in Figs. 2 and 3. To then effect the opening or separation of the stack of sheets 2 at any desired point it is merely necessary to adjust the member 14 to the proper position on its guideway 13 and apply a slight downward pressure to the bowed portion of spring 26. For example, if it is desired to separate the stack of sheets so that the sheet bearing the letter K will be available for reference to or entry of an item, member 14 is moved on guideway 13 to a position in which pointer 17 is directly opposite the letter K of index 19, in which position it will be yieldingly locked by engagement of the spring-biased detent 21 with the corresponding indentation 22, and pressure is then applied to spring 26 to flex the bowed portion thereof downwardly such an amount as to cause the latch 25 to move forwardly out of engagement with the detent 24. The spring 10 will thereupon act automatically to move the cover 3 to its open position, shown in Fig. 1, and also to move with the cover all of the sheets 2 which are above the sheet bearing the letter K, as the hook portion 18 of member 14 is then positioned to engage the edge portion 12 of the sheet bearing the letter J and said member therefore serves operatively to connect the latter sheet and those above it with the cover.

To separate the stack of sheets at some other point, the cover 3 is moved to its closed position, member 14 is adjusted to proper position with respect to index 19 and the cover is again released by applying a downward pressure to spring 26. In the device shown it is apparent that member 14 may be adjusted and spring 26 may thereafter be operated to release the cover by one hand and without materially changing the position of the hand.

It is to be understood that the index device shown and specifically described herein, is subject to numerous modifications and changes in the form and arrangement of its parts without departure from the spirit of my invention or the scope of the appended claims.

What I claim is:

1. In a device of the character described; a plurality of superimposed relatively separable sheets; means adjustable to select any desired point of separation of said sheets; and means adapted to be rendered effective upon a simple manipulation for automatically moving a number of said sheets, determined by a previously such selected point of separation, relatively to the rest of said sheets.

2. In a device of the character described, a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a member swingably connected to said support, means for selectively connecting said sheets with said member in such number as may be desired, and means whereby a simple manipulation will effect automatic swinging movement of said member and any sheet or sheets so selected relatively to said support and away from the rest of said sheets.

3. In a device of the character described, a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a member swingably connected to said support for movement towards and away from the same, said member being biased away from the support, and means for selectively connecting said sheets to said member for swinging movement therewith.

4. In a device of the character described, a support, a plurality of superimposed flat elements mounted for movement towards and away from said support, a member mounted for movement towards and away from the support, said member being biased away from the support, and means adapted to selectively connect said elements to said member for movement therewith.

5. In a device of the character described, a support, a plurality of superimposed sheets mounted for movement with respect to said support, a member associated with said sheets and mounted for movement towards and away from said support, said member being biased away from said support, means for releasably holding said member in a position adjacent said support, and means for selectively connecting said sheets to said member for movement therewith.

6. A device of the character described comprising a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a cover pivotally connected to said support and spring-biased away from the same, and means carried by said cover for selectively connecting said sheets in such number as may be desired to the cover for movement therewith.

7. A device of the character described comprising a support, a plurality of sheets mounted on said support for swinging movement, a cover pivotally connected to said support and adapted to overlie all of said sheets, said cover being spring-biased away from the support, means carried by the cover for selectively connecting thereto to move therewith any desired number of said sheets, and cooperative means on said support and cover for releasably locking the latter in a position adjacent the support.

8. A device of the character described comprising a support, a plurality of superimposed sheets mounted on said support for swinging movement, a cover pivotally connected to said support and spring-biased away from the same, and means for selectively connecting to the cover for movement therewith any desired number of said sheets, said connecting means comprising a device mounted on the cover for movement along one edge portion thereof.

9. A device of the character described comprising a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a cover pivotally connected to said support and spring-biased away from the same, means for selectively connecting to the cover for movement therewith any desired number of said sheets, said connecting means comprising a device mounted on the cover for movement along one edge portion thereof, and means for releasably locking the cover in a position adjacent the support, said locking means comprising a member mounted on said support and operable to release the cover, said member being so positioned on the support as to be adjacent the said edge portion of the cover when the latter is in its locked position.

10. A device of the character described comprising a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a cover pivotally connected to the support and biased away from the same, means for selectively connecting to the cover for movement therewith any desired number of said sheets, said connecting means comprising a device mounted on the cover for movement along one edge portion thereof, a detent carried by the cover, and an elongated upwardly bowed resilient member fixed at one end only to the support in such position as to be adjacent the said edge portion of the cover when the latter is adjacent the support, the other end of said member being provided with a latch which is adapted to engage said detent to thereby lock the cover in a position adjacent the support and which is disengageable from said detent by downward flexure of said member.

11. In an index of the character described, a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a cover for said sheets pivotally connected to said support, and means for selectively connecting said sheets to said cover for swinging movement therewith, said means comprising a device mounted on said cover for sliding movement only with respect thereto and along one edge portion thereof and selectively engageable in such movement thereof with said sheets, said cover and slidably mounted device having coacting means for releasably locking such device to the cover in any one of a plurality of positions.

12. In a device of the character described, a support, a plurality of superimposed sheets mounted for swinging movement relatively to said support, a cover for said sheets pivotally

connected to said support and biased away from the same to raised or open position, means for selectively connecting to the cover for movement therewith any desired number of said sheets, and means for releasably locking the cover in lowered or closed position comprising an elongated and normally bowed spring member secured at one end to the support and having a locking element at its other end, said locking element being in operative position when said spring member is in its normal bowed form and being movable to inoperative position by flexing of the spring member from its normal form.

13. A device of the character described comprising a support; a stack of superimposed sheets secured at one end portion to said support, each of said sheets having a permanent flexible crease adjacent the secured end portion thereof and about the line of which the sheet is adapted to swing, the creases of the sheets from the top to the bottom of the stack being at progressively increasing distances from the said secured end portion; a cover for said sheets pivotally connected to said support; and means for selectively connecting to the cover for movement therewith any desired number of said sheets.

14. In an index of the character described; a support; a stack of superimposed flat elements secured at adjacent edge portions to said support, each of said elements having a permanent transverse flexible crease adjacent the secured edge portion thereof, the said creases from the uppermost to the lowermost elements of the stack being at progressively increasing distances from said secured edge portions, adjacent edge portions of said elements other than the said secured edge portions being of progressively decreasing lengths from the uppermost to the lowermost elements; a cover adapted to overlie said flat elements and pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support; and means for selectively connecting said elements to said cover for movement therewith comprising a device movable on the cover along the edge portion thereof corresponding to the said other edge portions of said elements, said device having means which in such movement of the device on said cover selectively cooperates with the said other edge portions of said elements.

15. A stack of superimposed flat elements for use in a selective index device of the character described, said elements being designed to be secured together at adjacent edge portions thereof corresponding to one side of the stack, each of said elements having a transverse permanent flexible crease adjacent its respective said edge portion, the said creases from the uppermost to the lowermost elements of the stack being at progressively increasing distances from said edge portions, and adjacent edge portions of said elements corresponding to another side of the stack being of progressively decreasing lengths from the uppermost to the lowermost elements.

16. In a device of the character described, a support, a plurality of superimposed flat elements or sheets pivotally mounted at adjacent ends for swinging movement relatively to said support, a member pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support, and means cooperating with adjacent side edge portions of said elements or sheets which are substantially at right angles to the pivoted ends of said elements or sheets for selectively connecting said elements or sheets to said member for movement therewith.

17. In a device of the character described, a support, a plurality of superimposed flat elements pivotally mounted at adjacent ends for swinging movement relatively to said support, a cover adapted to overlie said flat elements and pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support, and means for selectively connecting said flat elements to said cover for movement therewith comprising a device mounted on said cover for movement along a side edge portion thereof which is substantially at right angles to the pivotal axis of the cover.

18. In a device of the character described, a support, a plurality of superimposed flat elements pivotally mounted at adjacent ends for swinging movement relatively to said support, a cover adapted to overlie said flat elements and pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support, and means cooperable with adjacent side edge portions of said flat elements which are substantially at right angles to the pivoted ends of said elements for selectively connecting said elements to said cover for movement therewith, said means comprising a device mounted on said cover for movement along a side edge portion thereof which is substantially at right angles to the pivotal axis of the cover.

19. In a device of the character described, a support, a plurality of superimposed flat elements pivotally mounted at adjacent ends for swinging movement relatively to said support, a cover adapted to overlie said flat elements and pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support, adjacent side edge portions of said elements which are substantially at right angles to the pivoted ends of said elements being of progressively decreasing lengths from the uppermost to the lowermost elements, and means for selectively connecting said elements to said cover for movement therewith comprising a device mounted on the cover for movement along the side edge portion thereof corresponding to the said side edge portions of said elements, said device having means which in such movement of the device on said cover selectively cooperates with the said side edge portions of said elements.

20. In a device of the character described, a support, a stack of superimposed flat elements secured together at adjacent end portions and also secured at such end portions to said support, each of said elements having a permanent transverse crease adjacent the secured end portion thereof, the said creases from the uppermost to the lowermost elements of the stack being at progressively increasing distances from said secured end portions, adjacent side edge portions of said elements which are substantially at right angles to said secured end portions being of progressively decreasing lengths from the uppermost to the lowermost elements, a cover adapted to overlie said flat elements and pivotally mounted on said support for movement to a closed position towards said support and to an open position away from said support, and means for selectively connecting said elements to said cover for movement therewith comprising a device mount-

ed on the cover for movement along the side edge portion thereof corresponding to the said side edge portions of said elements, said device having means which in such movement of the device on said cover selectively cooperates with the said side edge portions of said elements.

21. A stack of superimposed flat elements for use in a selective index device of the character described, each of said elements being swingable about a line adjacent one end of said stack, and adjacent side edge portions of said elements which are substantially at right angles to the said end of said stack being of progressively decreasing lengths from the uppermost to the lowermost elements.

22. A stack of superimposed flat elements for use in a selective index device of the character described, said elements being designed to be secured together at adjacent end portions thereof corresponding to one end of the stack, each of said elements having a transverse permanent crease adjacent its respective said edge portion, the said creases from the uppermost to the lowermost elements of the stack being at progressively increasing distances from said secured end portions, and adjacent side edge portions of said elements which are substantially at right angles to said secured end portions being of progressively decreasing lengths from the uppermost to the lowermost elements.

EDMUND W. A. PETER.

DISCLAIMER

2,115,537.—*Edmund W. A. Peter*, Vancouver, British Columbia, Canada. INDEX DEVICE. Patent dated Apr. 26, 1938. Disclaimer filed Oct. 17, 1945, by the inventor and the licensee, *The Bates Manufacturing Company*.

Hereby enter this disclaimer to claims 1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, and 21 of said patent.

[*Official Gazette November 27, 1945.*]

ed on the cover for movement along the side edge portion thereof corresponding to the said side edge portions of said elements, said device having means which in such movement of the device on said cover selectively cooperates with the said side edge portions of said elements.

21. A stack of superimposed flat elements for use in a selective index device of the character described, each of said elements being swingable about a line adjacent one end of said stack, and adjacent side edge portions of said elements which are substantially at right angles to the said end of said stack being of progressively decreasing lengths from the uppermost to the lowermost elements.

22. A stack of superimposed flat elements for use in a selective index device of the character described, said elements being designed to be secured together at adjacent end portions thereof corresponding to one end of the stack, each of said elements having a transverse permanent crease adjacent its respective said edge portion, the said creases from the uppermost to the lowermost elements of the stack being at progressively increasing distances from said secured end portions, and adjacent side edge portions of said elements which are substantially at right angles to said secured end portions being of progressively decreasing lengths from the uppermost to the lowermost elements.

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