No. 843,124. PATENTED FEB. 5, 1907.

C. TOWNSEND.

CHANGEABLE INDEX.

APPLICATION FILED MAR. 16, 1906.

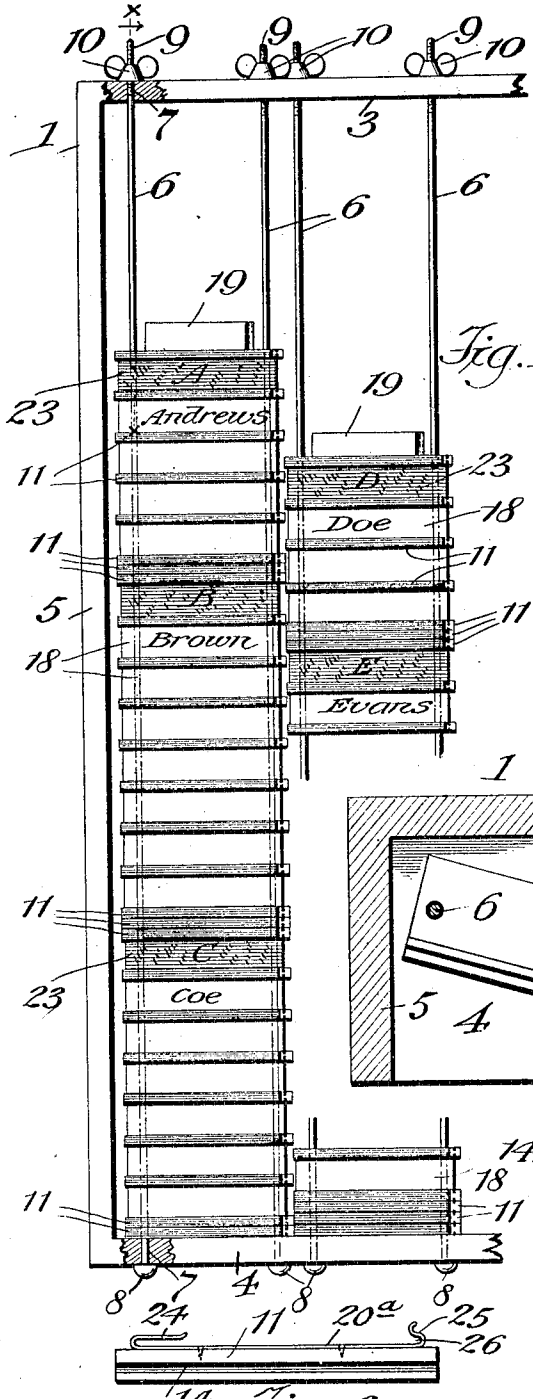

Fig. 1.

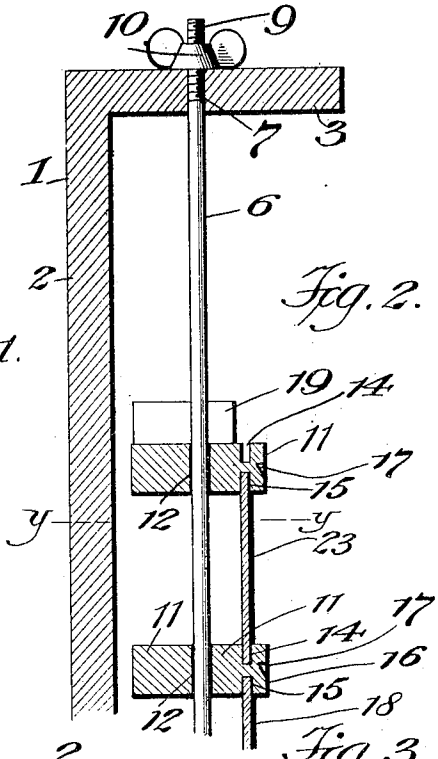

Fig. 2.

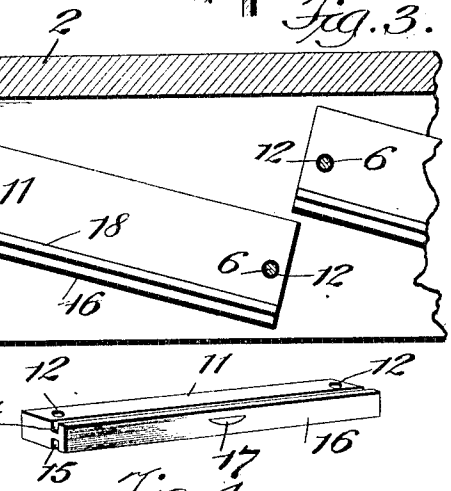

Fig. 3.

Fig. 4.

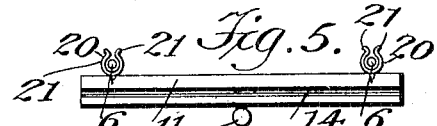

Fig. 5.

Fig. 6.

Witnesses
A. R. Appleman
Bessie Costigan.

Inventor
Copeland Townsend,
By his Attorney
J. R. Littell

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

COPELAND TOWNSEND, OF NEW YORK, N. Y.

CHANGEABLE INDEX.

No. 843,124. Specification of Letters Patent. Patented Feb. 5, 1907.

Application filed March 16, 1906. Serial No. 306,397.

To all whom it may concern:

Be it known that I, COPELAND TOWNSEND, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Changeable Indexes, of which the following is a specification.

This invention relates to changeable indexes of that class in which removable strips or cards placed or mounted in a frame or holder comprise the variable units of the index.

My improvements have special relation to an improved changeable index of the character set forth which is particularly adapted for service under conditions in which the units of the index are subject to frequent change, such as indexes of hotel guests, lists of names or addresses which are frequently changed or supplemented, indexes of books in circulating libraries, and various other systems or means for keeping for ready reference or within convenient view records or lists which are subject to variation or changes.

The object of my invention is to provide a simple and improved means of the character set forth which will at all times maintain the indicated data in full view and at the same time enable quick and convenient variation by insertion or removal of changing units of the data, which by its structural features and arrangement will facilitate quick reference to any individualized part of the data and will maintain the individualized parts of the data in compact space and accommodate the surface area thereof to a condensed or expanded condition, according to the insertion or removal of units, which will have a maximum degree of compactness and yet a wide range of capacity, according to the number of units to be indicated, and which will, furthermore, possess advantages in point of convenience, economy, adaptability, effectiveness, and general efficiency.

A special feature of my invention is a construction and arrangement under which individualized parts of the data on view—for instance, all the names under one letter of the alphabet—will occupy only a space or surface area proportioned to the number of units in use, blank unit-spaces between the units in use being avoided, whereby the surface space to be covered by the eye in an examination of the index is at all times condensed according to the actual number of units in use. This is effected by reason of the fact that upon removal of a unit the device automatically takes up the space which was occupied by the removed unit, and upon the insertion of a unit the surface area of the individualized part of the data to which the unit belongs is increased only to the extent of the unit inserted.

In the drawings, Figure 1 is a face view of an improved changeable index constructed according to my invention. Fig. 2 is a detail cross-section taken on the line $x\,x$, Fig. 1. Fig. 3 is a detail cross-section taken on the line $y\,y$, Fig. 2. Fig. 4 is a detail perspective view of one of the sliding holders for retaining and dividing the insertible and removable cards. Fig. 5 is a detail top plan view of a modified form of sliding holder. Fig. 6 is a detail top plan view of another modified form of a sliding holder.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, 1 designates a frame or casing, which may be in box form or of other suitable or adapted contour. As herein shown, the frame consists of a back 2, top piece 3, bottom piece 4, and side pieces 5 5. The frame or casing 1 is preferably mounted in vertical position, though it may be inclined or otherwise arranged in any suitable manner. The frame carries parallel guide-rods 6, extending from top to bottom and arranged in pairs. The guide-rods may be secured or connected to the frame in any suitable manner. In the construction herein shown the rods are secured in or to the frame 1 in a detachable or removable manner, which may be accomplished by having the rods pass through openings or perforations, as at 7, in the top and bottom pieces 3 and 4 of the frame 1, the lower end of the rod being provided with a head 8 and the upper end being screw-threaded, as at 9, to receive a thumb-nut 10.

In the construction just described the head 8 of the rod 6 will bear against the under side of the bottom piece 4 and the threaded end 9 will project above the top piece 3, so that the nut 10 may be tightened to secure the rod 6 in fixed connection with the frame 1. By removing the nut 10 the rod may be separated from the frame or the rod may be slipped

downwardly in the frame to enable the placing of additional sliding holders (hereinafter described) upon the released top ends of the guide-rods or the removal of the sliding holders therefrom, as desired, for increasing or reducing the capacity of the index, after which the end 9 of the rod 6 may be again inserted through the opening 7 in the top piece 3 and the rod tightened up in secure connection with the frame. The pairs of guide-rods 6 are preferably in diagonal position within the frame or casing 1, as shown in the drawings, whereby space is economized and the variable adjustment of the sliding holders is facilitated; but the relative arrangement of the parallel pairs of guide-rods with respect to the frame or casing 1 is not necessarily diagonal, and the pairs of rods may be mounted or arranged in any suitable position.

The sliding holders which retain and divide the insertible and removable cards constituting the units of the index are indicated at 11. These holders slide upon the respective pairs of guide-rods 6 and are maintained by the latter in relative operative position. The sliding holders 11 may consist simply of a flat block or strip, as shown in Figs. 1 to 4, inclusive, formed of wood or other suitable material and provided near each end with an opening or perforation 12, receiving the rod 6, the relative arrangement being such that each pair of rods 6 slidably carries a set of holders 11 in transverse parallel position. The structural characteristics and material of the holders 11 is preferably such that they are comparatively light in weight, and they are provided at a point in front of the guide-rods 6 with a longitudinal groove or recess 14 in the upper face of the holder and with a corresponding longitudinal groove or recess 15 in the under face. At the front edge 16 of the holders 11 is preferably provided means whereby the holder may be conveniently slid upon the guide-rods 6. Such means may simply consist of a notch or recess 17 in the front edge 16, adapted to be engaged by the thumb or finger nail for the purpose of lifting and sliding the holder upwardly upon the guide-rods.

The variable units of the index consist of insertible and removable cards, as shown at 18, which are inserted between the slidable holders 11, with their top edge entering the under groove 15 in the holder and their lower edge entering the upper groove 14 in the next holder beneath. These cards carry the desired data upon their faces, and they are of sufficient rigidity to support or sustain when in position between the holders the set of holders and cards which are superposed above each of the respective cards 18.

It will be understood that the cards 18 operate when in position to separate and support the holders 11 and that the holders operate to retain and support the cards in exposed position and also to divide or separate the respective unit-cards.

To insert a card, it is simply necessary to lift one of the holders which is not in service and slide the same upwardly upon its guide-rods 6 (which sliding movement will carry with it any superposed cards and holders) a sufficient distance to enable the insertion of a card between said holder and the next holder underneath, when the holder which has been lifted is released, and the sliding operation brings all the parts or members into position for retaining the inserted card.

To remove a card, it is simply necessary to slide the holder which is next above the card in the same manner as above set forth and then remove the card, after which upon releasing the holder all the members or parts will automatically slide downwardly and take up the surface-area space which was occupied by the removed card.

To facilitate the automatic downward or gravity action of the sliding holders in the retention or securing of the intervening cards 18 and in the automatic taking up of the surface-area space when cards are removed from between the holders, suitable means are provided. Such means may consist in having the topmost holder of each series or set of holders weighted by a metallic block or plate 19, secured to its top surface, as shown, or any other suitable means may be provided for facilitating the downward-sliding movement of the set of holders.

In Fig. 5 I have shown a modified construction of the sliding holders 11, in which the grooved or recessed block or strip does not itself receive the guide-rods 6, but the strip or block 11 is provided at its rear edge with a pair of spring-clips, as at 20, the body of which forms the opening or eye which receives the rod 6, while its projecting arms 21 21, forming the terminals of the eye-opening, are adapted to be sprung upon or drawn from the rod 6. The modified construction just described enables the holders 11 to be conveniently set upon or detached from the guide-rods for the purpose of supplementing or reducing the capacity of the index as desired. In the construction illustrated in Fig. 5 I have also shown a knob or finger-piece, as at 22, (in lieu of the notch or recess 17,) projecting from the front edge of the block 11 and forming a convenient means whereby the holder may be operated in its upwardly-sliding movement.

In Fig. 6 I have shown a modified construction of the sliding holders 11 similar to the detachable form illustrated in Fig. 5. In the present modification the strip or block 11 is provided at its rear edge with a spring-plate 20^a, extending longitudinally and having one end curved in approximately U shape, as at 24, to embrace one of the rods or guides 6, while its other end is curved in ap-

proximately S shape, as at 25, so that it may be sprung upon the other rod or guide 6 and form a socket, as at 26, for receiving said rod.

The operation and advantages of my invention and improvements will be readily understood by those skilled in the art to which it appertains. I have herein illustrated the invention in its application or adaptability for use as an index of hotel guests. In this use the columns formed by the respective pairs of guide-rods 6 and the respective sets of superposed parallel sliding holders 11, mounted upon said respective pairs of guide-rods, are alphabetically divided. This division may be accomplished by inserting a top card, as at 23, at any desired point of division between two of the holders 11 in the same manner as the index unit-cards 18 are inserted, which top card is provided upon its exposed face with a letter of the alphabet and is preferably of a distinctive color with relation to the cards 18, so that the quick visual examination of the index is facilitated. The index unit-cards 18, bearing upon their face the names of hotel guests and their room-number or any other desired data, are inserted beneath the respective guide-cards 23 and between the sliding blocks 11, which are beneath said guide-cards. The unit-cards 18 may be inserted or removed quickly and conveniently, as desired, in the manner hereinbefore set forth, by simply sliding the holders 11 upwardly and allowing them to automatically return downwardly. The unit-cards 18 are retained by the holders 11 so that their face carrying the desired designations or data is always exposed, and the cards operate to support the holders and the holders support the cards.

The improved construction and arrangement and operation of the parts or members of the device is such that the surface-area space occupied by any individualized part or section of the data on view is always condensed to the space required by the actual number of units in use, whereby no excess space or area need be covered by the eyes in the use of the index, thus insuring convenience, rapidity, and economy. When unit-cards 18 are removed, the surface-area space occupied by the same is automatically taken up, and the insertion of supplementary unit-cards only increases the surface-area space to the extent of the cards inserted. While condensation of space to the actual conditions of use is at all times insured, it will be understood that the construction and arrangement of the device is such that its entire capacity or the capacity of any individualized part or section may be readily and conveniently increased or diminished by mounting supplementary holders upon the guide-rods or by removing holders therefrom.

The same conditions of condensation in space and increasing or diminishing capacity exist when the device is employed under any other circumstances in which the units of the index or indicated data are subject to frequent change—as, for instance, when the unit-cards 18 carry lists of changing names and addresses or lists of books in or out of circulating-libraries.

The capacity of the device for any of the divers purposes or variations in which it may be effectively employed can be increased by simply multiplying the number of columns of parallel guide-rods 6 or the number of frames or casings 1, which are used for such columns.

I do not desire to be understood as limiting myself to the detail construction and arrangement of parts as herein shown and described, as it is manifest that variations and modifications therein may be resorted to in the adaptation of my invention to varying conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variations and modifications as properly fall within the scope of my invention and the terms of the following claims.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. An improved changeable index of the class described, comprising guides, and a plurality of separate holders slidably mounted on the guides and having means for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

2. An improved changeable index of the class described, comprising guides, and a plurality of separate holders slidably mounted on the guides and having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

3. An improved changeable index of the class described, comprising guides, and a plurality of holders slidably mounted on the guides and having means for engaging a card inserted edgewise between two of the holders and with its face exposed, said holders also having means adapted to be engaged to effect the sliding operation, substantially as and for the purpose set forth.

4. An improved changeable index of the class described, comprising guides, and a plurality of holders slidably mounted on the guides and having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed, said holders also having means adapted to be engaged to effect the sliding operation, substantially as and for the purpose set forth.

5. An improved changeable index of the class described, comprising guides, a plural-

ity of holders slidably mounted on the guides and having means for engaging a card inserted edgewise between two of the holders and with its face exposed, and means for automatically feeding the holders together when intervening cards are removed, substantially as and for the purpose set forth.

6. An improved changeable index of the class described, comprising guides, a plurality of holders slidably mounted on the guides and having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed, and means for automatically feeding the holders together when intervening cards are removed, substantially as and for the purpose set forth.

7. An improved changeable index of the class described, comprising guides, a plurality of holders slidably mounted on the guides and having means for engaging a card inserted edgewise between two of the holders and with its face exposed, and a weight bearing upon the end holder for automatically feeding the holders together when intervening cards are removed, substantially as and for the purpose set forth.

8. An improved changeable index of the class described, comprising guides arranged in pairs, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

9. An improved changeable index of the class described, comprising guides arranged in pairs, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

10. An improved changeable index of the class described, comprising guides arranged in pairs and relatively disposed in diagonal position, substantially as set forth, and a set of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

11. An improved changeable index of the class described, comprising guide-rods, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guide-rods, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

12. An improved changeable index of the class described, comprising guide-rods, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guide-rods, said holders having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed.

13. An improved changeable index of the class described, comprising guide-rods, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guide-rods and detachable therefrom, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

14. An improved changeable index of the class described, comprising guide-rods, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guide-rods and detachable therefrom, said holders having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed.

15. An improved changeable index of the class described, comprising guide-rods arranged in pairs, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly upon said pairs of guide-rods, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

16. An improved changeable index of the class described, comprising guide-rods arranged in pairs, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly upon said pairs of guide-rods, said holders having longitudinal face grooves or recesses for engaging a card inserted edgewise between two of the holders and with its face exposed.

17. An improved changeable index of the class described, comprising guide-rods arranged in pairs, and a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly upon said pairs of guide-rods and detachable therefrom, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

18. An improved changeable index of the class described, comprising guide-rods arranged in pairs and relatively disposed in diagonal position, substantially as set forth, and a set of holders superposed in parallel position one above the other and slidable upwardly and downwardly upon said pairs of

guide-rods, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

19. An improved changeable index of the class described, comprising guide-rods, and a set of holders superposed in parallel position one above the other and having openings receiving said guide-rods, whereby the holders are slidable upwardly and downwardly upon said guide-rods, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed.

20. An improved changeable index of the class described, comprising guide-rods, and a set of holders superposed in parallel position one above the other and having openings receiving said guide-rods, whereby the holders are slidable upwardly and downwardly upon said guide-rods, said holders having longitudinal face grooves or recesses in front of the guide-rods for engaging a card inserted edgewise between two of the holders and with its face exposed.

21. An improved changeable index of the class described, comprising guides, a plurality of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, and a card inserted edgewise between two of the holders and with its face exposed, the relative construction and arrangement being such that the cards support and divide the holders and the holders retain and support the cards.

22. An improved changeable index of the class described, comprising guides, a plurality of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having means for engaging a card, and a card inserted edgewise between two of the holders and with its face exposed, the relative construction and arrangement being such that the cards support and divide the holders and the holders retain and support the cards.

23. An improved changeable index of the class described, comprising guides, a plurality of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having a longitudinal face groove or recess for engaging a card, and a card inserted edgewise between two of the holders and with its face exposed, the relative construction and arrangement being such that the cards support and divide the holders and the holders retain and support the cards.

24. An improved changeable index of the class described, comprising a frame or casing, guides detachably mounted therein, and a set of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, said holders having means for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

25. An improved changeable index of the class described, comprising guides, a set of separate holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, cards inserted edgewise between two of the holders and with their faces exposed, said cards carrying upon their face designations indicating the subdivisions of the index, and cards inserted edgewise between two of the holders beneath said subdivision-cards and with their faces exposed, said latter cards carrying designations indicating the units of the index.

26. An improved changeable index of the class described, comprising guides, a set of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, and index cards or members detachably inserted edgewise between two of said holders and supporting the same in separated position, substantially as and for the purpose set forth.

27. An improved changeable index of the class described, comprising guides, a set of holders superposed in parallel position one above the other and slidable upwardly and downwardly in connection with said guides, index cards or members detachably inserted edgewise between two of the holders and supporting the same in separated position, and means for automatically returning the holders together when said cards or members are removed, substantially as and for the purpose set forth.

28. An improved changeable index of the class described, comprising holders slidable upwardly and downwardly, and index cards or members carrying upon their face the indicated data and inserted between two of said slidable holders edgewise and with their faces exposed, the relative construction and arrangement being such that the index cards or members support and divide the holders and the holders support and divide the cards, substantially as and for the purpose set forth.

29. An improved changeable index of the class described, comprising guides or fixed members arranged in pairs, and a plurality of slidable holders operating upon said guides and respectively having openings receiving the respective members of said pairs of guides, whereby the holders transversely connect the guides or members, said holders having means in front of said openings for engaging a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

30. An improved changeable index of the

class described, comprising guides or fixed members arranged in pairs, and a plurality of slidable holders operating upon said guides and respectively having openings receiving the respective members of said pairs of guides, whereby the holders transversely connect the guides or members, said holders having longitudinal grooves or recesses at the top and bottom and in front of said openings for engaging the edges of a card inserted edgewise between two of the holders and with its face exposed, substantially as and for the purpose set forth.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

COPELAND TOWNSEND.

Witnesses:
ADAM LANDER,
H. CHAPMAN.