United States Patent [19]

Friedman

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[54] **BOOK INDEXING MEANS**

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[52] **U.S. Cl.** **283/42**

[51] **Int. Cl.** **B42f 21/12**

[58] **Field of Search** 283/36–42, 283/63; 281/15

[56] **References Cited**

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[57] **ABSTRACT**

The leaves of a book are arranged as separate sections each constituted of a batch of consecutive sheets of the same fiber containing paper and having a turning axis common thereto. The first sheet in each batch carries indicia identifying that particular batch. The fibers of all the batch leaves are oriented in a direction parallel to their turning axis. Immediately preceding the first leaf of each batch an indexing leaf is inserted. Each indexing leaf is made of the same paper as the batch leaves, but its fibers are oriented in a direction substantially normal to the turning axis of the leaves. This arrangement assures that the flexibility and resilience of the indexing leaves are different from the flexibility and resilience of the batch leaves. When the book is thumbed, the differences are effective to bring about a noticeable retardation in the rate of turnover of the leaves as each indexing leaf is reached. The action is automatic.

4 Claims, 3 Drawing Figures

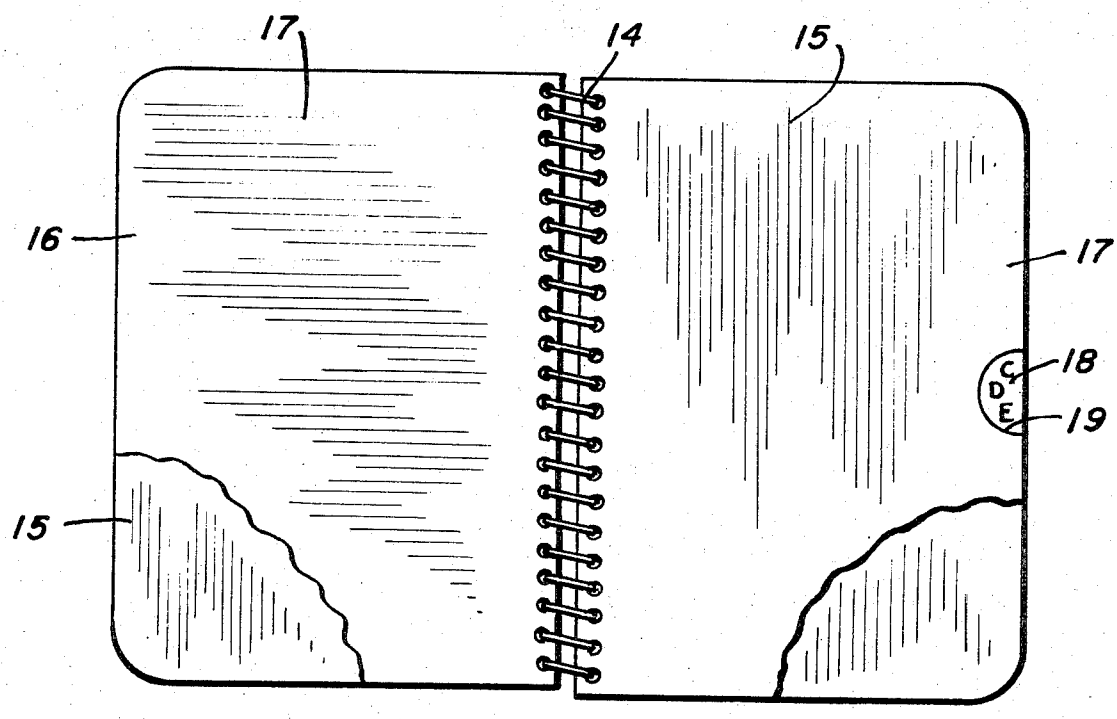


Fig. 1

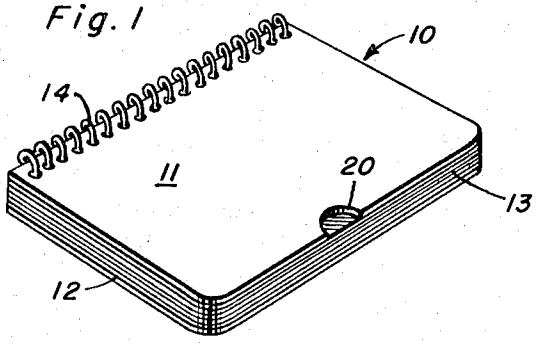


Fig. 2

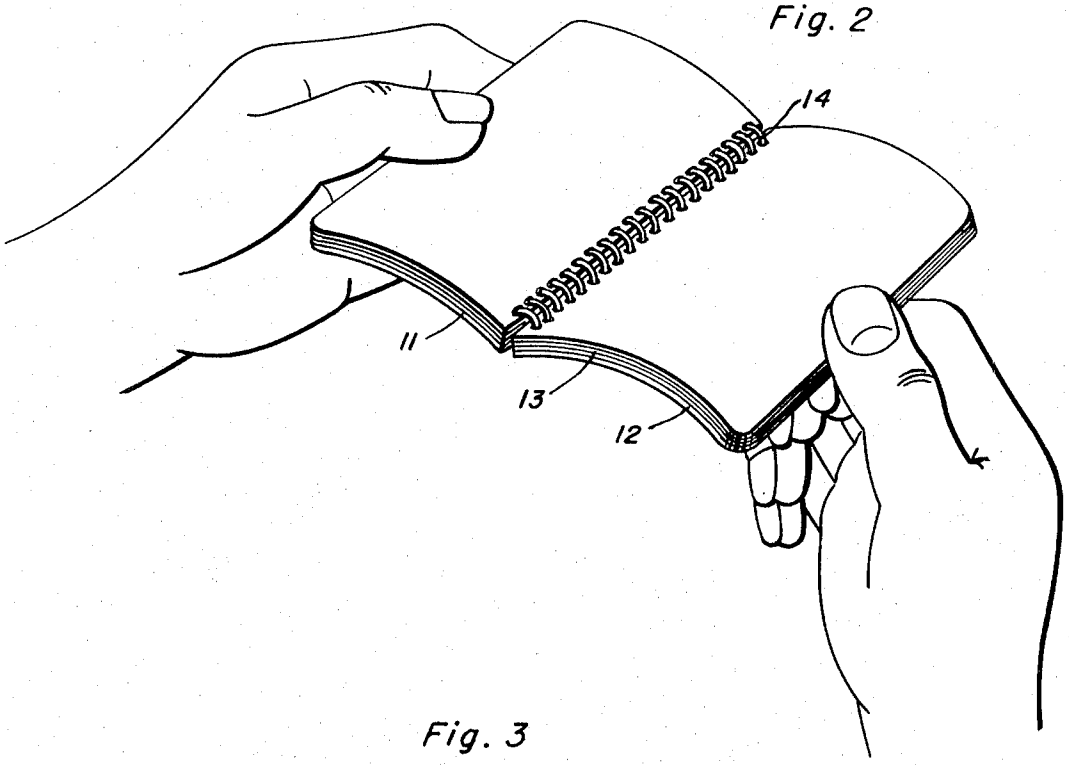
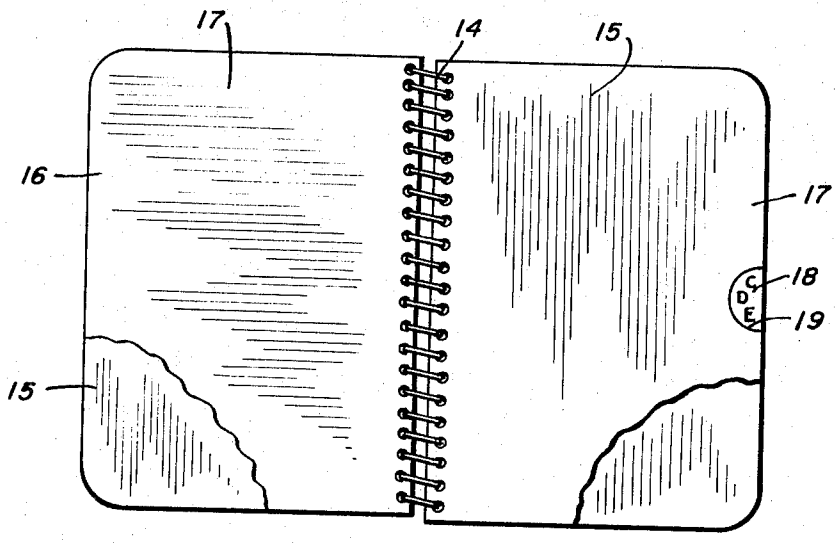


Fig. 3



BOOK INDEXING MEANS

BACKGROUND

The field of this invention is the art of book leaf indexing. As used herein, the term "book" means any assembly of consecutive flexible sheets fastened or bound together along one side edge marginal zone only, constituting leaves of which their opposite faces form pages.

The prior art concerned with the indexing of book leaves is replete with various expedients for indexing the leaves to facilitate access to any desired portion of a book. The vast majority of these makes use of visual indicators such as projecting tabs, finger accomodating edge grooves, etc., all of which depend upon visual identification of a selected portion of the book from its exterior, before it is opened; so that the book may be opened initially at the desired portion. In opening, all leaves preceding the first leaf of a selected portion must either be hand lifted and moved as a batch to a position in which they do not obstruct view of the first leaf of the selected portion or be allowed to fall by gravity to such position; they do not automatically remove themselves from the desired line of vision when the book is opened.

SUMMARY OF THE INVENTION

The invention intrinsic in the specific embodiment herein disclosed is a means for indexing the leaves of a book in such manner that access may quickly be had to any desired portion thereof, simply by thumbing the leaves so that their free edges slide beneath the thumb of a person holding a batch of consecutive leaves between the thumb and forefinger, as when riffling a deck of playing cards in shuffling. In the present invention, the rate of passage of the leaf edges beneath the thumb is automatically retarded at predetermined intervals which individually denote both the ending of a particular batch of leaves and the beginning of the next following batch. The period of retardation, although miniscule, is nevertheless sufficient to enable optical recognition of identifying indicia on the leading page face of the next following batch of leaves. Such indicia characterizes the content of the batch it identifies.

In the present invention, all the paper sheets comprising its leaves are identical in size and composition, but are arranged in such manner that each leaf which immediately precedes the first leaf of the next following batch is, in effect, somewhat less flexible and resilient than the leaves which precede and follow it. In consequence, when the book is "thumbed" as indicated in the foregoing paragraph, the leaves of less resilience pass between the thumb and forefinger at a slower rate than the others and thus provide the intervals of retardation.

A silent feature of this invention is the fact that during thumbing of the book its leaves progress by batches, apparently jumping from one retardation point to the next following retardation point without separation of the leaves in any batch, thereby greatly facilitating the location of a desired batch. This phenomenon is perhaps due to the fact that in small books of the type to which the invention is most applicable, the batches individually comprise relatively few leaves as compared with, for example, general purpose telephone directories, city directories and the like, in which each subdivision includes a large number of leaves.

DESCRIPTION OF DRAWINGS

FIG. **1** is a perspective view of a book comprising the present invention.

FIG. **2** is a perspective view of the book as held in the act of thumbing its leaves.

FIG. **3** is a plan view, partly broken away, illustrating the book in fully opened position at a desired section.

DESCRIPTION OF PREFERRED EMBODIMENT

As herein disclosed, the invention is embodied in a pocket size personal telephone directory or address book **10** having a front cover **11**, a back cover **12**, and an assembly of consecutive leaves **13** between them. The covers are conventional, such as light, flexible cardboard or the like, but the leaves are sheets of paper containing parallel oriented fibers. All the sheets constituting the leaves **13** are identical in size and composition, and, together with the covers, are bound or fastened together along one marginal edge zone by means here shown as a spiral ring binder **14**.

The book leaves are arranged as a sequential series of sections having different subject matter. Each section is composed of a batch of consecutive leaves wherein the fibers **15** of each leaf are oriented in a direction parallel to the turning axis of the leaves. Due to this arrangement, the leaves of all the batches are equally resilient and flexible. Each batch is separated from the next following batch by the interposition of retardation means **16** constituted of a leaf identical to all the others in size and composition, but with its fibers **17** oriented in a direction that is transverse (preferably at a right angle) with respect to the turning axis of the leaves. Orientation of the fibers **17** in this direction serves, in effect, to make the retardation leaf less flexible and resilient than the batch leaves **13** when the book is thumbed with the leaves riffling either to the left or to the right.

As shown in FIG. **3**, the leading leaf **17** in each batch is provided with individual batch identification indicia **18** located on its first page face adjacent its outer (indexing) side edge and preferably within an area deliniated by distinctive boundary lining **19**. It so happens that in the particular type of book specifically shown herein each indicia means **18** consists of one or more of the letters of the alphabet, but it could, of course, be anything that characterizes the content of a batch it identifies. As the various indicia means are not visible in any respect before the book is opened, they need not be in relative staggered or echelon relation, and may conveniently be located at the same point on each index page, in an easily seen position. As a matter of illustration, but not limitation, the front cover **11** of the book here shown is provided midway of its indexing side edge with a thumb guide cutout **20** below which the various indicia areas may be disposed in registry therewith, with the boundary line **19** of each conforming to the shape of the thumb guide cutout in the front cover.

MODE OF OPERATION

When the book is held as shown in FIG. **2**, its leaves naturally assume a convex curvature. This places them under tension and imparts a spring bias, causing those at the right of the binder to slide from beneath the thumb and flip over to the left of the binder in the conventional manner of turning the pages of a book by

thumbing its leaves. In such operation the unbound (indexing) side edges of the leaves slide beneath the thumb at a fairly uniform rate of progression. However, when one of the retardation leaves **16** passes beneath the thumb its indexing edge, because of the spring bias, is in greater frictional contact with the thumb than any of the immediately preceding and following leaves. This greater frictional contact imposes a drag which, although very slight and of very short duration, is sufficient to retard the rate of progression of the leaves enough to enable optical recognition of the identification indicia on the next following leaf. If such indicia signals that a desired batch section has been reached, a slight increase of thumb pressure will stop further progression of the leaves.

While the invention is principally adapted for use as an indexing means for books, it also finds utility in animated booklets. A series of photographs or cartoons in sequential order to depict motion as well known in the art may be placed near a corner of each of the leading leaves **17.** When the book is then thumbed there will be a retardation in the leaf turnover rate as each indexing leaf is reached, thereby presenting the picture on the leading leaf for momentary viewing. The overall effect of thumbing through the book is one of character movement or animation similar to a motion picture.

I claim:

1. In a book having a sequential series of separate sections each constituted of a batch of consecutive leaves made of paper containing parallel fibers all oriented in the same direction, and an indexing leaf made of the same paper as the batch leaves and immediately preceding the first leaf of each batch, the fibers of each indexing leaf being oriented in a direction different from the direction of orientation of the batch leaf fibers, both the batch and indexing leaves having a common turning axis, the direction of orientation of the batch leaf fibers being substantially parallel to said axis and the direction of orientation of the indexing leaf fibers being substantially normal to said axis.

2. In the book of claim **1**: all said batch and indexing leaves being of the same size and configuration.

3. In the book of claim **1**: the first leaf in each batch having thereon a distinctive identification indicia containing area adjacent its indexing side edge; and all said areas being in registry from front to back of the book.

4. In the book of claim **1**: a front cover; and thumb positioning guide means thereon in registry with said indicia containing areas.

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