Jan. 29, 1952 C. B. COOK 2,583,998

BOOK

Filed Oct. 28, 1949

FIG. 1.

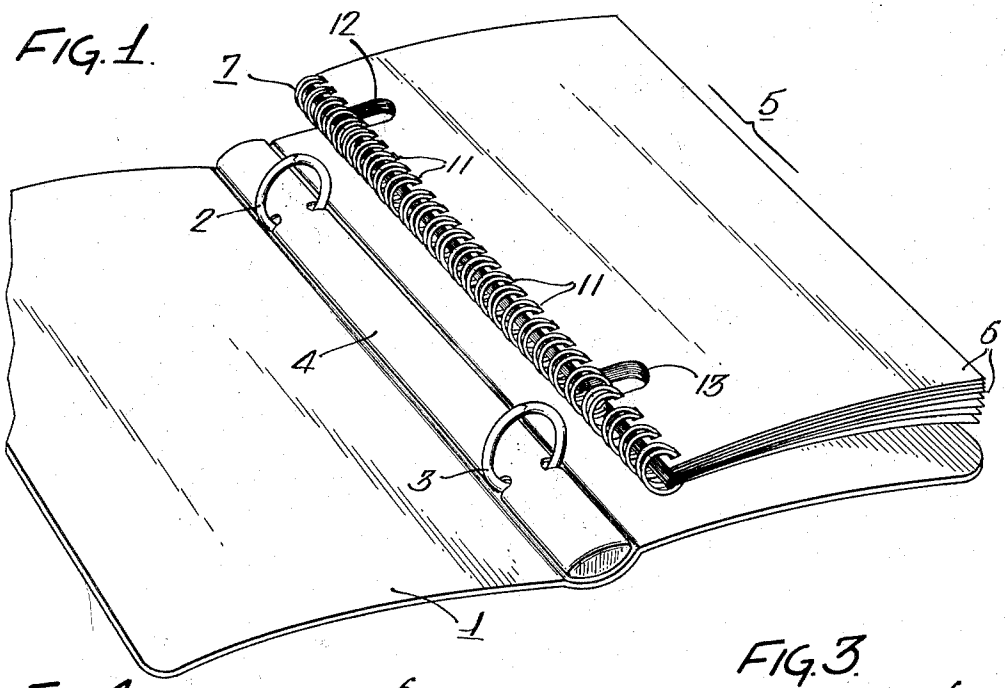


FIG. 4.

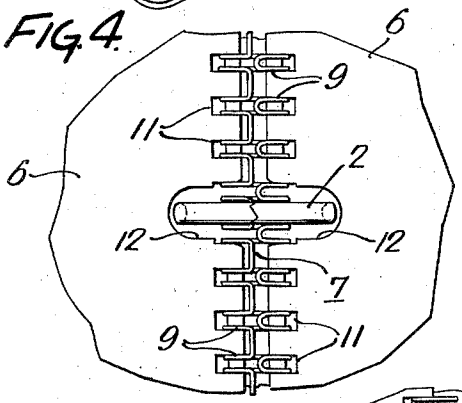


FIG. 3.

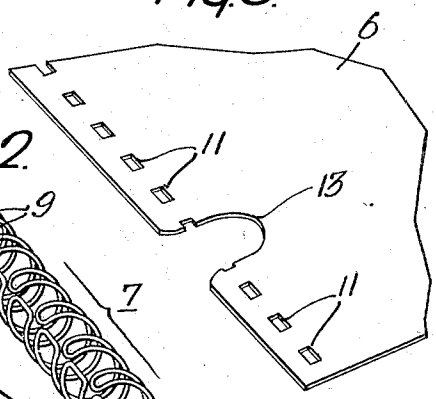


FIG. 2.

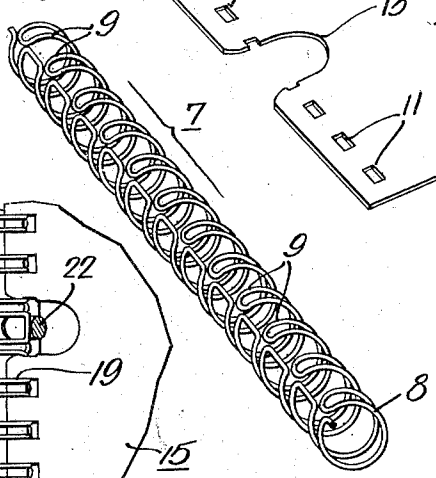


FIG. 6.

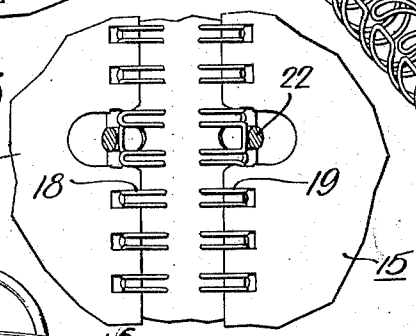
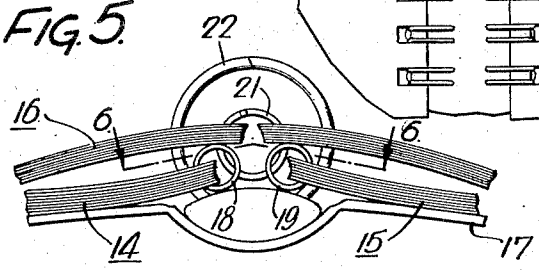


FIG. 5.



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UNITED STATES PATENT OFFICE

2,583,998

BOOK

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Application October 28, 1949, Serial No. 124,136

5 Claims. (Cl. 281—19)

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This invention relates to improvements in books of the loose-leaf type and the principal object of the invention is to provide a binder structure which will be more flexible, durable and generally more efficient than the corresponding bindings of the prior art.

The invention will be more readily understood by reference to the attached drawings, wherein:

Fig. 1 is an exploded view in perspective of the essential elements of a book made in accordance with the invention;

Fig. 2 is an enlarged view in perspective of one of the elements illustrated in Fig. 1;

Fig. 3 is a fragmentary view in perspective of one of the leaves of the book formed for operative association with the binding elements shown in Fig. 2;

Fig. 4 is a fragmentary plan view of the interior of the fully assembled book showing the operative relation of the binding elements;

Fig. 5 is a fragmentary elevational view showing a modified form of book within the scope of the invention, and;

Fig. 6 is a sectional view on the line 6—6 of Fig. 5.

With reference to the drawings, 1 is the outer cover member of the book, this member taking the form in the present instance of a conventional loose-leaf binder having a pair of binding rings 2 and 3 which are split and which are mounted so as to be capable of opening and closing in accordance with the conventional practice. The ring supporting elements are enclosed, in the present instance, within an elongated casing 4 which is secured at the mid-section of the cover. As set forth above, this cover member is of conventional type and its construction and mode of operation will be readily understood from the foregoing description.

The reference numeral 5 indicates, in general, a filler unit composed of a plurality of individual leaves 6 each bound to the others along one longitudinal edge by means of a binder element 7. The form of this binder element is most clearly illustrated in Fig. 2, it being noted that it consists, in effect, of an elongated cylinder of relatively small diameter composed of a single piece 8 of spring wire bent to provide a plurality of fingers 9 arranged in longitudinal series extending over the full length of the binder, the ends of which fingers may be inserted through correspondingly arranged apertures 11 in one edge of the filler leaves (see Fig. 3) so as to bind a plurality of such leaves together as shown in Fig. 1. In the present instance, the leaves 6 are individually detachable from the binder 7.

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The binder 7 is a conventional and well-known type of binder, but the filler unit 5 departs from the conventional in the provision in the bound edges of the leaves 6 of two recesses 12 and 13 which extend inwardly from the bound edges. These recesses 12 and 13 are spaced apart a distance corresponding to the distance between the binder rings 2 and 3 of the cover member 1 and since the rings 2 and 3 are of greater diameter than the binder element 7, it is possible to insert the binder 7 into the interior of the rings, after the latter have been opened, so that when the rings are closed, they will embrace the sections of the binder 7 which bridge the outer ends of the recesses 12 and 13. Fig. 4 illustrates the assembly produced in this manner.

It will be noted that in this assembly the leaves 6 bound together by the small diameter binder 7 are entirely free from and have no direct contact with the rings 2 and 3 and that the unit 5 is held in place within the cover member 1 against radial displacement entirely through the interlock between the rings 2 and 3 and the binder 7. This device affords a material simplification and improvement over the prior devices. The leaves 6 are readily turned from one side of the cover to the other around the binding element 7 with the entire freedom which is a characteristic of small diameter binders of that class. The recesses 12 and 13 are of such depth that in shifting from one position to the other, the leaves 6 have no material contact with the rings 2 and 3, as well illustrated in Fig. 4. Tendency to mutilation of the sheets is greatly reduced by confinement of the leaves solely in the multiple apertures 11 on the fingers 9 of the binders 7 and by avoidance of any direct binding connection between the leaves and the rings 2 and 3.

It will be noted that a book of this character may comprise one or a plurality of units similar to the unit 5, a multiple assembly being shown in Figs. 5 and 6. In this assembly three separate units, designated respectively by the reference numerals 14, 15 and 16, are united in the cover member 17. Each of the units 14 and 15 comprises a cylindrical binder, 18 and 19 respectively, corresponding to the binder 7, and the unit 16 has a similar cylindrical binder 21 of somewhat larger diameter to accommodate the larger number of leaves in this unit. The rings of the cover 17 described by the reference numeral 22, embrace the binder elements 18, 19 and 21 in the manner described above in connection with the embodiment of Figs. 1 to 4 inclusive.

It will be understood that the detail form and

character of the small diameter binder 7 may vary materially and that any of a number of available binders will answer the purpose. It will be understood also that the form of the cover member may vary, as well as the number and mode of operation of the binding rings. Similarly, there may be considerable variation in the form of the leaf elements of the filler units.

I claim:

1. A book comprising a cover member, a filler unit having a plurality of leaf elements and a binder having interlocking engagement individually with an edge portion of each leaf element and uniting said elements, said leaves having openings in the said edge portions thereof intersected by said binder, and filler-retaining rings on said cover member embracing the said binder where it intersects the said openings whereby displacement of the filler unit from the cover member in direction radially of the rings is prevented solely by the inter-engagement of the rings with the binder.

2. A book according to claim 1 wherein the binder of said filler unit consists of a tubular member having longitudinally spaced circumferential elements engaged respectively in similarly spaced apertures in the edge portions of the leaves, said sheets being individually adjustable about said elements to opposite sides of the tubular member.

3. A book according to claim 1 wherein the filler-retaining rings are split and are mounted so as to be capable of being opened and closed to admit and release the said filler units.

4. A book according to claim 1 wherein a plurality of the filler units are embraced by the rings within the binder.

5. A book according to claim 1 wherein the said openings in the leaves are in the form of recesses extending inwardly from the proximate edges of the leaves to a depth approximating the radius of the cover rings.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
Re. 10,903	Hawkins	Feb. 21, 1888
2,019,001	Desbarat	Oct. 29, 1935
2,116,989	Unger et al.	May 10, 1938
2,161,591	Rose et al.	June 6, 1939

FOREIGN PATENTS

Number	Country	Date
313,643	Great Britain	June 14, 1929