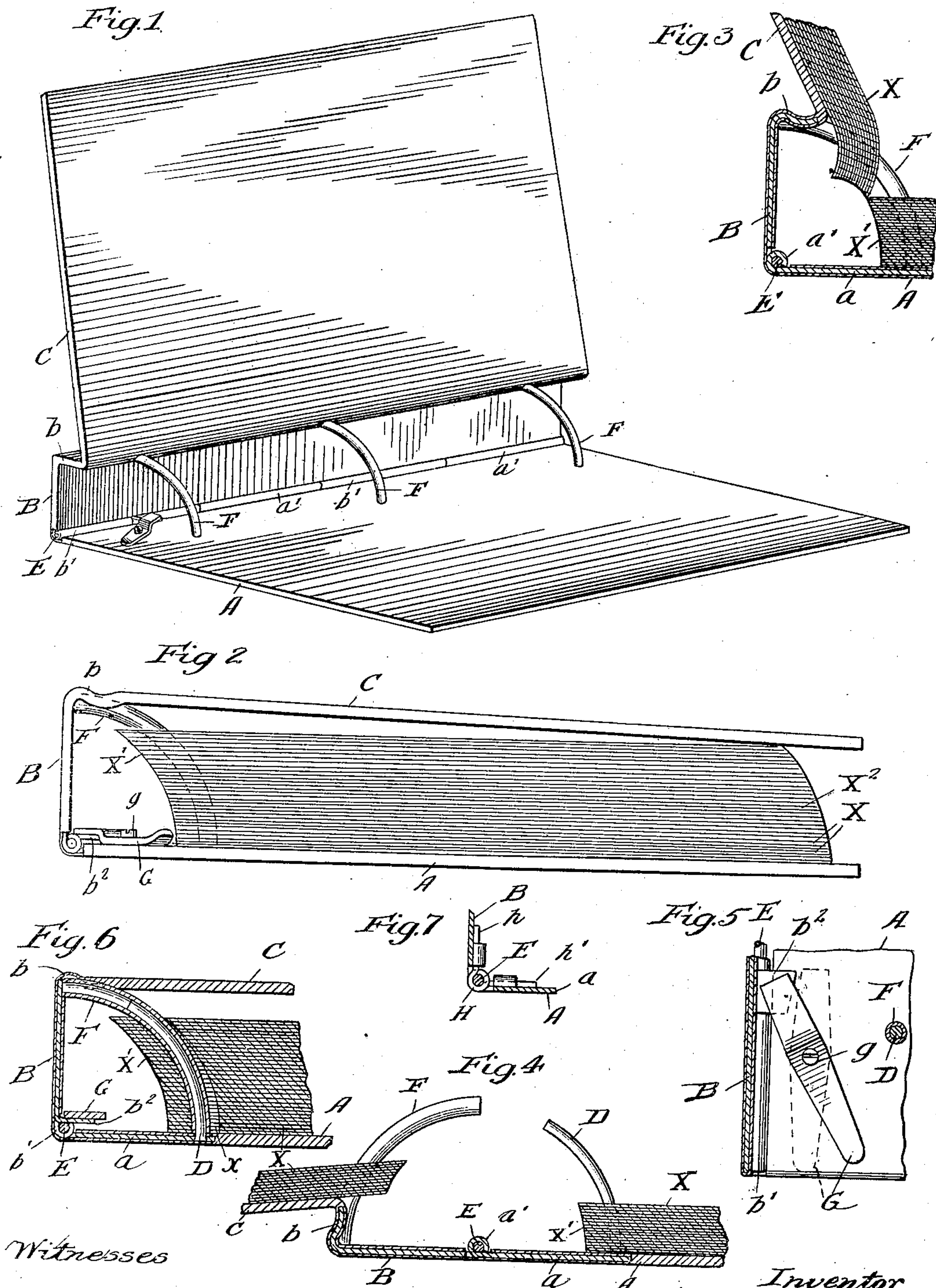


No. 890,877.

PATENTED JUNE 16, 1908.

F. VON SCHLEGELL.  
LOOSE LEAF BOOK.  
APPLICATION FILED DEC. 6, 1907.



Witnesses

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# UNITED STATES PATENT OFFICE.

FREDERICK VON SCHLEGELL, OF CHICAGO, ILLINOIS.

## LOOSE-LEAF BOOK.

No. 890,877.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed December 6, 1907. Serial No. 405,324.

*To all whom it may concern:*

Be it known that I, FREDERICK VON SCHLEGELL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Loose-Leaf Books, of which the following is a specification.

My invention relates to loose leaf books or temporary binders.

10 The object of my invention is to provide a loose leaf book or temporary binder of a simple, efficient and durable construction, in which the sheets or leaves will lie flat on either the top or bottom cover when the book  
15 is open, so that the sheets may have writing on both sides and be conveniently read; which will hold a maximum number of leaves for a given thickness of book; in which the leaves may be conveniently inserted and re-  
20 moved; in which a leaf may be readily inserted or removed at any point; which will afford extra room for conveniently swinging the leaves back and forth from one cover to the other; in which the book whether closed  
25 or opened at any place desired, all the leaves will be securely retained in position on both sides of the place where the book is open; which will not tend to tear or injure the sheets or leaves; which will admit of the  
30 sheets being reinforced around their holes when desired without materially lessening the capacity of the book, and which will remove the difficulties and objections heretofore experienced with loose leaf books or tem-  
35 porary binders of the constructions now ordinarily in use.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts or devices by  
40 which this object or result is practically accomplished, as herein shown and described and more particularly specified in the claims.

In the accompanying drawing, forming a part of this specification, Figure 1 is a per-  
45 spective view of a loose leaf book or temporary binder embodying my invention, showing the top cover open and the book empty of leaves, in order to better show the construction; Fig. 2 is an end view showing the  
50 book closed; Fig. 3 is a vertical cross section, showing the leaves held by the horns telescoped together and the book open; Fig. 4 is a similar view showing the hinged book opened and the leaf holding horns telescoped  
55 apart to insert or remove a leaf; Fig. 5 is a detail view showing the locking device for

locking the hinged back in its normal or closed position; Fig. 6 is a vertical section through the horns; and Fig. 7 is a detail view illustrating a modification wherein a  
60 spring is employed as the means for locking or holding the back in its normal or closed position.

In the drawing A represents the bottom cover, B the back hinged at its lower edge to  
65 the inner edge of the bottom cover, C the top cover, D the quadrant-shaped leaf holding horns secured to the bottom cover A at points about equal to the width of the back B from the inner edge of said bottom cover  
70 A, and F the cooperating quadrant-shaped leaf holding horns secured to the hinged back B at or near the upper edge thereof and telescoping or sliding past the cooperating horns D on the bottom cover A, when the hinged  
75 back is in its normal position, and separating or telescoping away from said horns D when the hinged back is opened away from the bottom cover, so that a leaf may be inserted or removed between the separated horns on  
80 back and bottom cover.

The bottom cover A may be of any suitable material; I prefer, however, to make it of leather furnished with a reinforcing plate  
85 or strip *a* of metal at its inner portion upon which to secure or mount the quadrant-shaped leaf-holding horns D. The reinforcing plate *a* need not be as wide as the bottom cover A. The leaf holding horns D project  
90 upwardly from the bottom cover and are secured thereto, preferably, by soldering, brazing, riveting, or in any other suitable manner.

The hinged back B may be of any suitable stiff or rigid material. It is, preferably, of  
95 sheet metal, and furnished with a reversely curved flange *b* at its upper edge for convenient junction with the top cover C of the book, which is preferably of leather or flexible material, and extended over the back B.  
100 The back B is hinged at its lower edge to the inner edge of the bottom cover A by a hinged pintle E, which extends through integral hinge ears *b*<sup>1</sup> on the back B and *a*<sup>1</sup> on the metal reinforcing plate *a* of the bottom  
105 cover A.

The quadrant-shaped leaf holding horns F are secured to the back B at its upper edge and are preferably tubular in form, and adapted to telescope over or around the cooperating  
110 quadrant-shaped horns D on the bottom cover A. The hinged back B is preferably



provided with an integral locking lip or tongue  $b^2$  at its lower or hinged edge, and preferably projecting inwardly at right angles for coöperation with a movable locking device or latch G, on the bottom cover A to lock or hold the hinged back B in its right angle or normal position in relation to the bottom cover A. The locking device, latch or lever G is preferably movably connected to the bottom cover A by a rivet  $g$  acting as a pivot for the latch G to swing upon.

In the modification illustrated in Fig. 7, a spring H is substituted for the locking device shown in the other figures for holding the hinged back in its normal or closed position. The spring H is preferably a coiled spring surrounding the pintle E of the hinge, and having one end  $h$  bearing against the back B, and its other end  $h^1$  bearing against the bottom cover A. I prefer, however, to use a positive locking device as first described instead of a spring locking device, as shown in Fig. 7.

As in my invention the back is hinged at its lower edge to the inner edge of the bottom cover, and as the coöperating telescoping horns D and F are quadrant-shaped, and secured, the one to the upper edge of the hinged back and the other to the bottom cover at a point outward from the back equal to, or approximating the width of the back, the leaves X which are furnished with the customary holes  $x$  for the horns to pass through, are adapted to lie perfectly flat on the bottom cover, and to also lie perfectly flat against the top cover when it is opened at whatever point the book may be opened, as will be readily understood from Figs. 1, 2, 3 and 4 of the drawing, and this whether the back is locked in its right angle or normal position, or whether the hinged back is unlocked or swung open in line with the bottom cover A. And this construction also enables the book to be opened and closed as desired for use or examination and for removal and insertion of leaves without putting any strain upon the leaves tending to tear or injure the same. And this construction also enables the leaves to swing freely from one cover to the other in opening the book, and with ample room for any movement desired, as the leaf holding horns extend in a diagonal curved direction from the upper edge of the back to points on the bottom cover materially outward from the inner edge of the bottom or lower cover of the book, so that the horns, thus extending in this diagonally curved direction, greatly exceed in length the width of the book or thickness of the back, thus giving ample room for the leaves and materially increasing the capacity of the book. Owing to the curved shape and diagonally extending direction of the horns, the leaves X, when lying flat upon the bottom cover of the book, pile up at their inner edges  $X^1$  in an inclined or offset rela-

tion to each other, as will be readily understood from Fig. 2, so that the leaves may be thickened or reinforced around the holes  $x$  therein if desired, without materially diminishing the number of leaves which may be held in the book when thus reinforced and thickened around the holes  $x$ .

The inwardly projecting, slightly curved but substantially right angle flange  $b$  at the edge of the hinged back prevents the leaves, when the book is closed and held upright with its back lowermost, from sliding towards the back over the horns far enough to allow their inner edges to touch or rest against the back and curl under. This right angle flange also insures the leaves falling back to their normal position when the cover is thrown shut, as shown in Figs. 2 and 6, as it prevents the leaves threading over the portions of the horns which are substantially horizontal to the cover C when it is closed. If the leaves adjacent to the cover C were permitted to thread down over the extreme end portions of the horns and come in contact with or rest upon the back B at their edges and be curled under thereby, the leaves or the eye holes therein would be speedily destroyed. Without the flange  $b$  at the upper edge of the book oval slots or greatly enlarged eye openings would also be required in the leaves to enable the leaves adjacent to the cover C to occupy anything like a flat position, as otherwise the leaves which thread over the end portions of the horns adjacent to the upper edge of the back B, would require to make a nearly right angle bend or fold in closing the book. And oval slots or large openings in the leaves for the horns are extremely undesirable and detrimental. The right angle flange  $b$  at the upper edge of the back B, thus in my invention performs a very important function by preventing the leaves from threading down over the end portions of the horns, which are substantially tangential or parallel to the cover when it is closed, and where the leaves if threaded over such portion will be required to assume nearly right angle bends in closing, thus bulging the book and presenting flat closure of the leaves, and necessarily putting the bulged and bent leaves to tearing strain at the eyeholes. This right angle flange  $b$  in my invention also renders it entirely unnecessary to provide the leaves with large or elongated eye openings.

As in my invention each of the telescopic horns is substantially a quadrant, it is ordinarily unnecessary to slip the leaves over the extreme ends of the outer or larger horns in the ordinary opening and closing of the book, and this necessarily prevents danger of tearing the leaves at the eye holes, as none of the leaves are ordinarily required to pass from the smaller to the larger horn in opening and closing the book.

To remove or insert a leaf from any part



of the book, the lock G is first released, and then the back B is opened out about its lower edge as a hinge and the quadrant-shaped horns thus telescoped apart, as illustrated in Fig. 4, so that a leaf or leaves may be inserted or removed as desired. The horns D and F are preferably made long enough so that the horn F will telescope over the horn D for substantially the whole length thereof, so that the perforated leaves in being swung from one cover to the other will not have to pass over any shoulder or obstruction at the end of the horn F. This prevents danger of tearing the leaves at the holes therein through which the leaves pass. As my invention causes the leaves X to lie with their outer edges X<sup>2</sup> in an upwardly inclined or offset relation to each other, this also materially facilitates access to the ordinary type of edge index at the outer edges of the leaves.

I claim:

1. A loose leaf book, comprising in combination a top cover, a bottom cover, a back hinged at its lower edge to the inner edge of the bottom cover, quadrant-shaped telescopic horns projecting respectively from the upper edge of the back and from the bottom cover at points away from its inner edge approximately equaling the width of the back, means for preventing the leaves on the horn from threading over the upper end portions thereof which are substantially at right angles to the back and means for holding the hinged cover in its normal or right angle position, substantially as specified.

2. A loose leaf book, comprising in combination a top cover, a bottom cover, a back hinged at its lower edge to the inner edge of the bottom cover, quadrant-shaped telescopic horns projecting respectively from the upper edge of the back and from the bottom cover at points away from its inner edge approximately equaling the width of the back, and means for holding the hinged cover in its normal or right angle position, said hinged back having a reversely curved flange at its upper edge, substantially as specified.

3. A loose leaf book, comprising in combination a top cover, a bottom cover, a back hinged at its lower edge to the inner edge of the bottom cover, quadrant-shaped telescopic horns projecting respectively from the upper edge of the back and from the bottom cover at points away from its inner edge approximately equaling the width of the back, means for preventing the leaves on the horn from threading over the upper end portions thereof which are substantially at right angles to the back and said bottom cover and hinged back having interengaging devices for locking the hinged back in its normal position, substantially as specified.

4. A loose leaf book, comprising in combination a top cover, a bottom cover, a back hinged at its lower edge to the inner edge of

the bottom cover, quadrant-shaped telescopic horns projecting respectively from the upper edge of the back and from the bottom cover at points away from its inner edge approximately equaling the width of the back, said back having a flange at its upper edge to prevent the leaves from threading over the end portions of the horns adjacent thereto and said bottom cover and hinged back having interengaging devices for locking the hinged back in its normal position, consisting of a locking lip on the hinged back and a movable latch on the bottom cover, substantially as specified.

5. In a loose leaf book, the combination with a bottom cover furnished with curved leaf holding horns projecting upwardly therefrom at points away from its inner edge, of a back hinged at its lower edge to the inner edge of said bottom cover, and provided at its upper edge with curved leaf holding horns said back having a flange at its upper edge to prevent the leaves from threading over the end portions of the horns adjacent thereto, substantially as specified.

6. In a loose leaf book, the combination with a bottom cover furnished with curved leaf holding horns projecting upwardly therefrom at points away from its inner edge, of a back hinged at its lower edge to the inner edge of said bottom cover, and provided at its upper edge with curved leaf holding horns, said back having a flange at its upper edge to prevent the leaves from threading over the end portions of the horns adjacent thereto said bottom cover and back having interengaging locking devices to hold said back in its normal position, substantially as specified.

7. In a loose leaf book, the combination with a bottom cover furnished with curved leaf holding horns projecting upwardly therefrom at points away from its inner edge, of a back hinged at its lower edge to the inner edge of said bottom cover and provided at its upper edge with curved leaf holding horns, said hinged back having a flange at its upper edge, and a top cover, substantially as specified.

8. In a loose leaf book, the combination with a bottom cover furnished with curved leaf holding horns projecting upwardly therefrom at points away from its inner edge, of a back hinged at its lower edge to the inner edge of said bottom cover and provided at its upper edge with curved leaf holding horns, said hinged back having a flange at its upper edge and a top cover, said bottom cover and back having interengaging locking devices to hold said back in its normal position, substantially as specified.

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Witnesses:

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