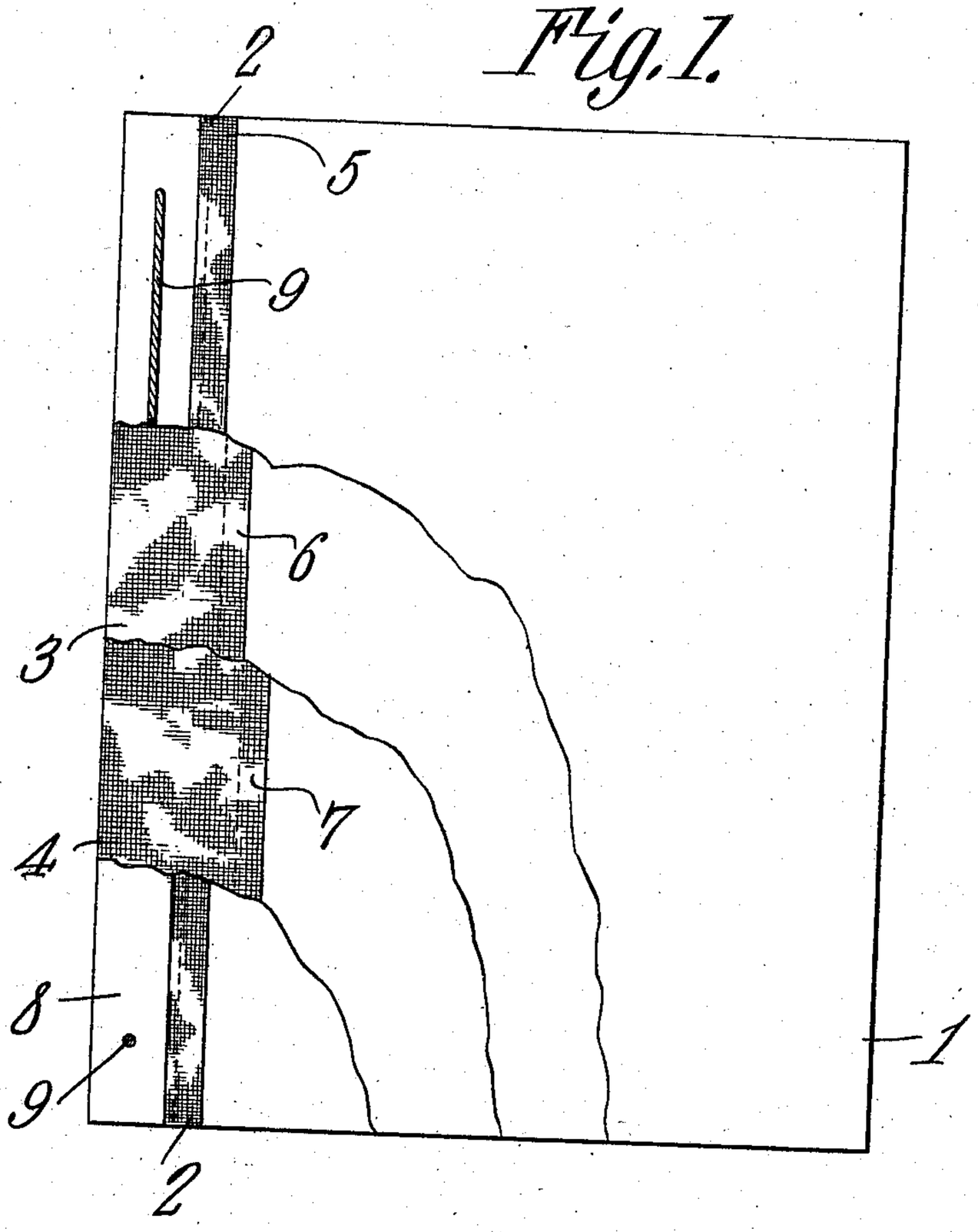
No. 881,794. PATENTED MAR. 10, 1908.

J. GRIESINGER.

BOOK.

APPLICATION FILED APR. 4, 1907.

Fig. 1.



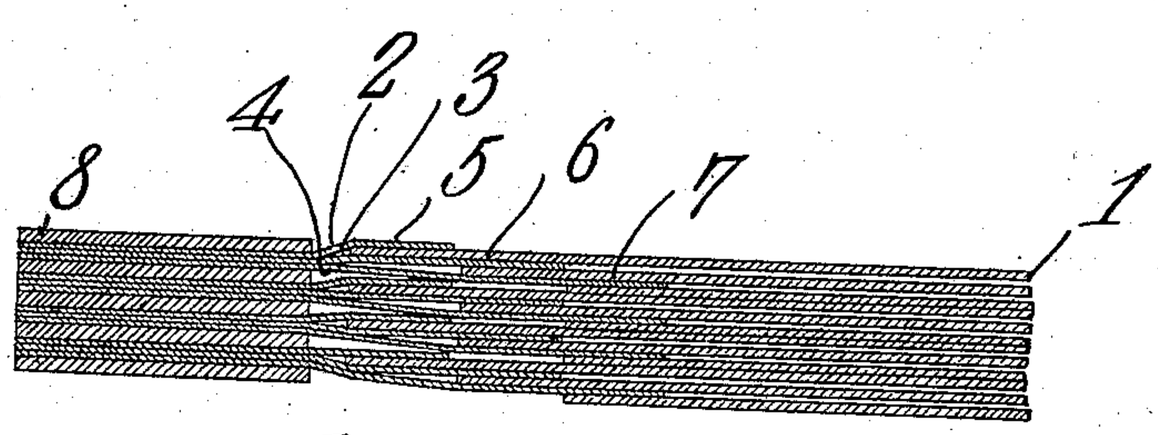


Fig. 2.

WITNESSES:

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JOHN GRIESINGER, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO WILLIAM F. WISMAR, OF LOS ANGELES, CALIFORNIA.

BOOK.

No. 881,794. Specification of Letters Patent. Patented March 10, 1908.

Application filed April 4, 1907. Serial No. 366,357.

To all whom it may concern:

Be it known that I, JOHN GRIESINGER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Book, of which the following is a specification.

This invention has reference to improvements in books, and its object is to provide a means whereby the leaves may be secured to stubs for binding in such manner that the thickness of the book is not increased by the addition of the binding stubs.

The invention consists essentially in providing the paper leaves with cloth stubs of different widths so that the overlapping edges of any paper leaf and cloth stub or hinge will overlie a portion of the next adjacent hinge or stub where there is no paper, thus materially reducing the thickness of the assembled leaves at the point where they are hinged. I have found that in practice it is sufficient to use stubs or hinges of three different widths, although my invention is by no means limited to this number, and at intervals between the cloth hinges beyond the point of connection of the shortest hinge with the corresponding leaf there are inserted paper strips of such thickness as to build up the back of the book to a thickness corresponding to the body of the book where it is made up of paper leaves only. These filling-in pieces likewise form a strong and heavy back edge for the book through which the cord used for sewing the leaves together may be passed in the usual manner.

The invention will be fully understood from the following detailed description taken in connection with the accompanying drawings forming part of this specification, in which,—

Figure 1 is a side elevation, with parts broken away, of a book formed of leaves constructed in accordance with the present invention, but with the cover omitted; and Fig. 2 is a cross section of the same with the thickness of the laminæ exaggerated.

Referring to the drawings, there are shown paper sheets 1 which may be taken as indicative of the paper leaves of an ordinary book. Each leaf is attached at its rear edge to a muslin or other cloth hinge 2, 3 or 4, as the case may be, the rear edge of the hinge extending to the rear of the book. The hinge 2 overlaps its corresponding leaf 1, as indicated at 5, for a sufficient distance to form a good strong connection by being pasted along this overlapping portion to the leaf 1. The hinge 3 is wider than the hinge 2 by a sufficient extent so that when it is overlapped on to its corresponding leaf 1, as indicated at 6, and is suitably pasted thereto, this overlapping portion will be in front of the overlapping portion 5 of the hinge 2, and the overlapping portion 7 of the hinge 4 will be correspondingly in front of the overlapping portion 6 of the hinge 3. The rear edges of the three hinges are all coincident. Consequently, each succeeding hinge of the series is as much wider than the preceding hinge as is measured by the overlapping portion 6 or 7. Now, although the muslin hinge may be considerably thinner than a leaf 1, still in a book of considerable thickness if the adjoining portions between the hinges and leaves are located in the same plane there would be produced a very material and marked increase in thickness at this point, but by causing the junction points between the hinges and leaves to lie progressively farther and farther away from the back of the book, the increased thickness is scarcely or not at all perceptible. Since these hinges occupy a portion of the leaf not utilized for any purpose except for binding, the series of hinges may include quite a number, depending on the size of the book and the amount of space utilizable at the binding edges of the leaves, and while I have shown in the drawing a series of three hinges of progressively varying widths, it is to be understood that under proper conditions more than three hinges may be used in each series. Since the muslin hinges are considerably thinner than the leaves they are attached to, the back of the book would be considerably thinner than the body of the book if these muslin hinges were simply stitched together at this point, but in order to increase the thickness of the back of the book filling strips 8 may be employed between two successive series of muslin hinges, or oftener if desired, and through this portion of the book the stitching, indicated at 9, will be passed, thus binding the whole firmly together.

The advantage of using cloth hinges for the binding edges of the leaves is, of course, well understood and need not be particularly set forth herein. By my invention, however, all the advantages of cloth hinged leaves for

a book are retained, such, for instance, as the flat opening and practically non-tearable connection, while the increased thickness at the point between the paper leaves and the cloth hinges, where hinges of the same width are employed, is to all intents and purposes practically eliminated by the arrangement effected by my invention.

I claim:

1. A book having its leaves provided with binding hinges, each of a stronger material than that of the body of the leaf and overlapping the rear edge of the leaf and having the overlapping portion of each leaf at a different distance from the rear edge of the book than that of the next adjoining leaf on either side, and filling strips of a width less than the distance from the rear edge of the leaves having the shortest hinges to the rear edge of said hinges.

2. A book comprising a number of groups of leaves, each group being made up of a number of suitable leaves, flexible hinges therefor of other material than that of the leaves and united thereto by overlapping the rear edges of the leaves, with the overlapping portions of each leaf and its hinge at a different distance from the rear edge of the book than that of the overlapping portion of the next adjacent leaf and its hinge, all the hinges of a group being brought together back of the rearmost edge of the longest leaf of the group, and filling strips between the assembled groups of hinges beyond the rear edges of the leaves.

3. A book comprising paper leaves, cloth hinges therefor, each of different width than that of the next adjacent hinge and united to the rear edge of the leaf, and filling strips between the rear ends of the cloth hinges beyond the rear edges of all the leaves, the said filling strips being all of the same width but of less width than the free portions of the shortest hinges.

4. A book comprising a number of groups of leaves with each group made up of leaves and flexible hinges therefor united by overlapping the rear edges of the leaves, with the rear edges of the several leaves of a group at progressively greater distances from the rear edge of the book, the groups of leaves being assembled into the form of a book with the shortest hinge of one group next adjacent to the longest hinge of the next group.

5. A book comprising a number of groups of leaves with each group made up of leaves and flexible hinges therefor united by overlapping the rear edges of the leaves, with the rear edges of the several leaves of a group at progressively greater distances from the rear edge of the book, the groups of leaves being assembled into the form of a book with the shortest hinge of one group next adjacent to the longest hinge of the next group, and filling strips all of the same width but of less width than the shortest hinge.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN GRIESINGER.

Witnesses:

WM. F. WISMAR,

WILL COOPER.