No. 657,503. Patented Sept. 4, 1900.

C. J. TAYLOR.

BOOKBINDING.

(Application filed Mar. 30, 1900.)

(No Model.)

Fig. 1

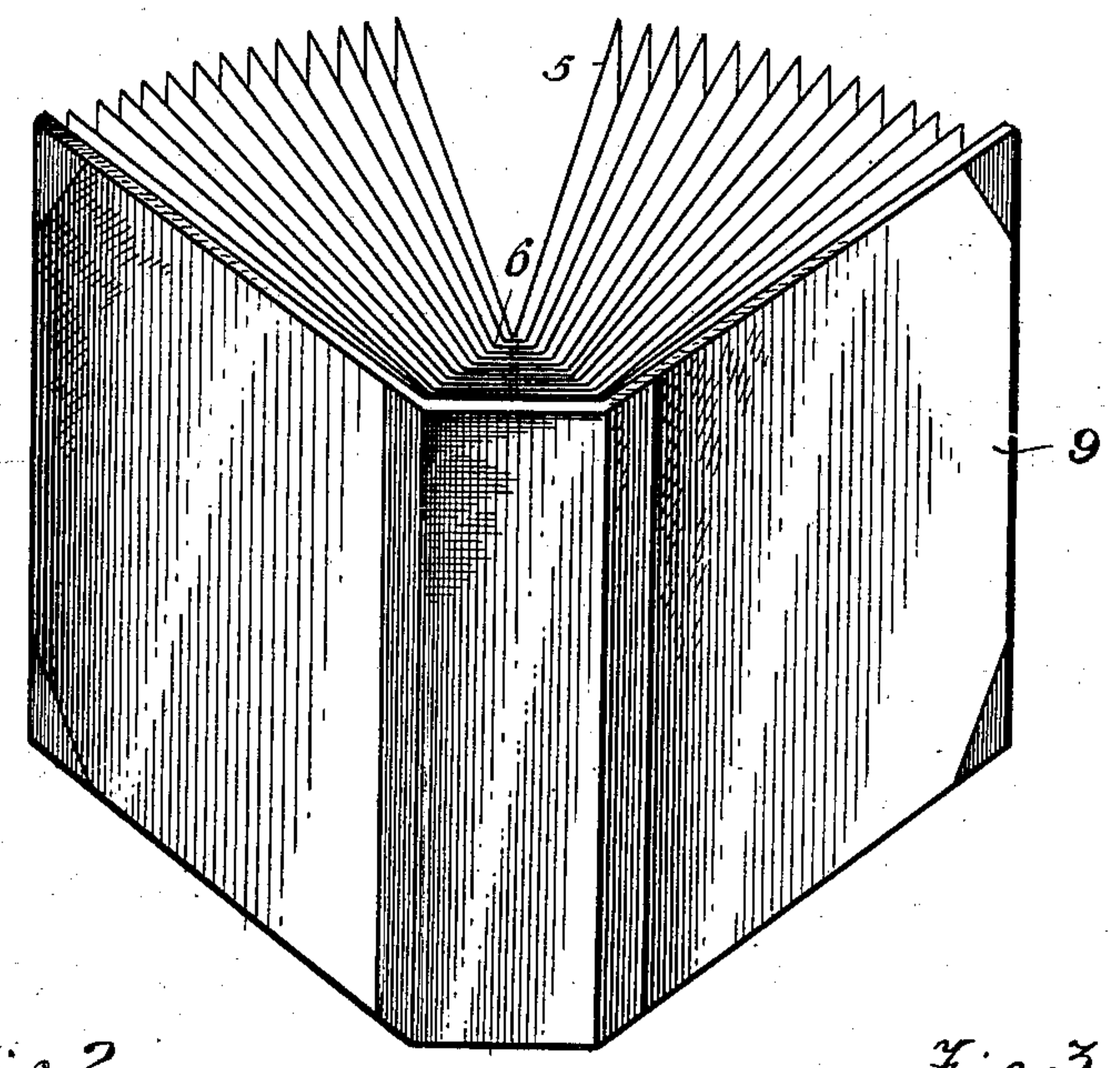


Fig. 2

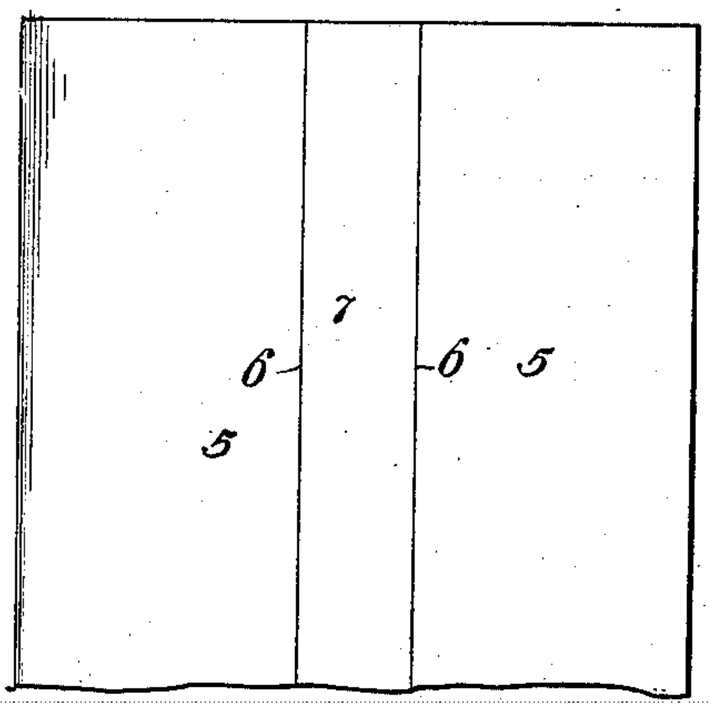


Fig. 3

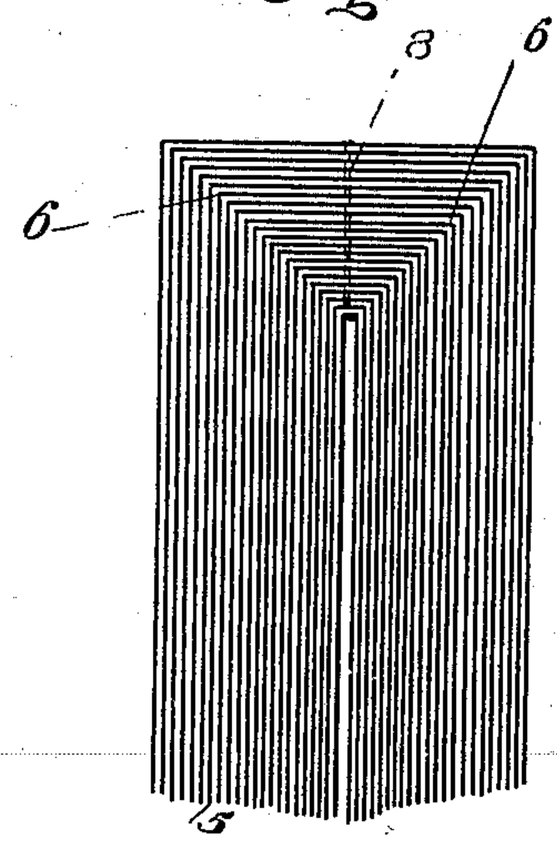
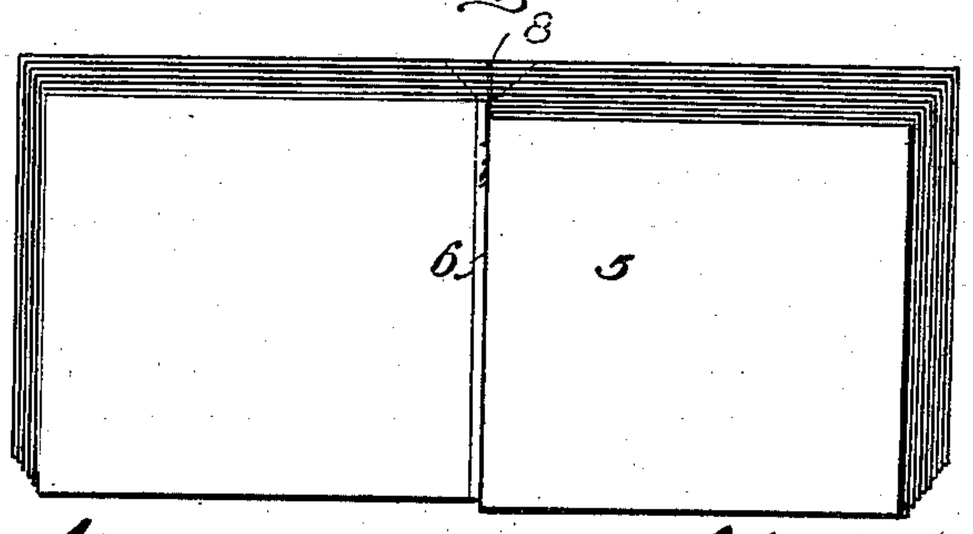


Fig. 4.



Witnesses:
Edmund A. Strauss,
C. L. Wood.

Inventor
Charles J. Taylor
By Wm. O'Brien Atty.

UNITED STATES PATENT OFFICE.

CHARLES J. TAYLOR, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN B. HALL, JR., OF SAME PLACE.

BOOKBINDING.

SPECIFICATION forming part of Letters Patent No. 657,503, dated September 4, 1900.

Application filed March 30, 1900. Serial No. 10,813. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. TAYLOR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bookbinding, of which the following is a specification.

My invention relates to certain new and useful improvements in bookbinding; and one object is primarily to make a book with a flat square back and consisting of a number of double leaves forming a single signature which will open flat at any place and can be bent back without injuring the binding.

Some books are made by fastening together a number of signatures by side stitching, each signature consisting of a number of folded double leaves nested together. Such books cannot be opened so that the leaves will lie perfectly flat because of the side stitching, and if this stitching is located too close to the back edge of the signature and the book is forced open or bent backward the stitching will frequently break through the back and permit the signature to fall out. A great many pamphlets and small books are made of a single signature, the leaves of which are fastened together by saddle-back stitching, but the regular size of such books is limited to about one-quarter of an inch in thickness, and even then it is a difficult matter to trim the book without breaking off one of its corners or otherwise marring its appearance. The side-stitched books have a square back, but saddle-back-stitched books do not, and as a square back is preferred as presenting a neater and better appearance books which might be made in one signature at a great deal less cost are sometimes divided into two signatures and side-stitched for the sole purpose of securing a square back. Various means have also been employed for providing flat-opening books, and these means have usually consisted in the provision of some kind of a hinging device connected with the signature or grooving or treating the leaves in some way to produce a hinging effect. These methods are more or less expensive and impractical for general bookbinding, and it is therefore with the object in view of overcoming the objections to the methods of binding books heretofore practiced and to provide an inexpensive method of binding to produce a book which will always open flat wherever it is opened that I have devised this invention.

Another object of my invention is to provide a book with a flat square back and consisting of only a single signature, the leaves of which are fastened together through the back and not through the side.

My invention also has other objects in view, which will be pointed out hereinafter in the detailed description thereof.

In the accompanying drawings, Figure 1 illustrates a book partly opened and embodying my invention. Fig. 2 shows one of the double leaves and the creases therein. Fig. 3 is a top view of a book embodying my invention. Fig. 4 illustrates a book opened flat.

Referring to the drawings, in which like numerals of reference denote corresponding parts in the several figures, it will be observed that a book embodying my invention will consist of a number of double leaves 5, having parallel creases 6 at the back thereof and providing a back portion 7, which is of gradually-decreasing width in each successive sheet from the outside of the book to the middle thereof, so that the sheets may be nested in a regular and even manner to form a book of uniform thickness. I may crease the sheets in any way and by any means, and it will be understood that to form these creases the sheets are not necessarily scored to the extent of cutting them to any depth, although while I prefer not to cut the sheets unless it be necessary, I am fully aware that in some cases it may be the most convenient way of accomplishing the object in view. For this reason I do not limit myself to simply "creasing" the sheets in the ordinary acceptation of that term as accomplished by folding; but in the specification and in the claims I desire to have it understood that my use of the word "creasing" is intended to cover and include and does cover and include the ordinary creasing of any kind or scoring or other operation which will accomplish the objects of my invention. A book made in accordance with my invention will therefore consist of a single signature, and the creases on each sheet will be made so that all the sheets when nested will

form a firm and solid signature, so that the book when bound will be of substantial character.

I employ any kind of fastening devices for binding the sheets together, wire, thread, or other means being used in any way and in any manner desired to produce a fastening through the back in the nature of a saddle-stitch.

It will be observed that I produce a book having many novel characteristics, chief among which is that it will open perfectly flat at any place and remain in the open position without buckling up in any way, thereby disclosing the entire sheet to plain view and presenting a flat surface which can be written upon clear up to the crease in the sheet, and each page resting flat upon the others, which constitute a solid base for writing. This is of especial importance in connection with almost all kinds of blank books, and, in fact, with all books which are to receive writing, including order, receipt, and delivery books, scrap and check books, albums, &c. It also greatly facilitates the use of carbon-sheets, as these sheets can be arranged in a book made in accordance with my invention to much better advantage, and writing thereon is greatly facilitated.

Another of the important features of the invention consists in the provision of a book having a square or flat back, which permits of fastening a paper or cardboard or other cover on the book, thereby giving it the appearance of an ordinary sewed book with side stitching, while as a matter of fact the sheets are fastened by saddle-back stitching or otherwise. This square character given to the book by reason of the manner in which it is made greatly improves the appearance of the book and makes it more substantial and lasting, enabling the use of a stiff back in many cases where it has not been possible to advantage and at a reasonable cost heretofore.

While my improved book consists of a single signature, the sheets of which are fastened through the back, as by saddle-back stitching, it may be made of any size and of any number of sheets and trimmed properly without being marred. It is also possible to open a book made in accordance with my invention, such as a song-book, and bend it back so that the covers thereof will meet without injuring the book in any way, and the invention is also very useful in connection with all kinds of song and music books, folios, &c., as they will remain opened flat when so arranged on a music-rack or other support.

In connection with scrap-books and albums the invention is particularly useful, as the leaves will remain flat and rest upon a solid foundation formed by the underneath leaves when the book is open to facilitate the insertion of clippings or pictures, and the usual buckling or curving of the leaves is practically avoided entirely.

When the book is opened at any page up to the middle of the book, the entire surface of both pages from the creases on that side of the fastening devices will be exposed to view in a flat position and in a manner which will permit of writing thereon clear up to the creases. When the book is opened beyond the middle thereof, the surface of both pages will be accessible up to the creases therein on that side of the fastening device. The outside sheet has the widest back portion, and the back portions gradually decrease in width until the inner sheet has practically only one crease, although I prefer to have a narrow back portion here to accommodate the fastening devices, and when the sheets are made of heavy paper or cardboard for albums and the like it will probably be desirable to have the middle sheet provided with a narrow back portion; but this is not necessary in ordinary books and will depend entirely upon the character of the book and the purpose for which it is used. By providing a square back for the book it will be observed that I secure all the advantages claimed for those books having hinged leaves without employing the expensive and complicated methods and means necessary for making them. The fastening device is located in the middle of the back portion of the leaves between the creases, so that each sheet has a free swinging or hinging movement on its creases, which enables the book to be opened flat and avoids breaking the binding, which is commonly done with a great many books. If desired, the creases may be made by perforating the leaves, so that they can be torn out. Some books have their backs rounded before the case or cover 9 is put on, technically called "casing;" but all sewed books are first made with square backs, and I therefore employ the term "square back" with reference to the unbound book before it is cased and irrespective of the manner in which it is afterward bound.

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

1. A book consisting of a number of double leaves nested and fastened together through the back, in a single signature, said signature having a square back, substantially as described.

2. A book consisting of a number of double leaves fastened together in a single signature, said leaves being each provided with a square back portion and nested together, substantially as described.

3. A book consisting of a number of double leaves provided with square back portions of gradually-decreasing width and nested and fastened together to form a single signature, substantially as described.

4. A book consisting of a number of double leaves nested and fastened together, said leaves being provided with parallel creases to form square back portions, substantially as described.

5. A book consisting of a number of double leaves nested and fastened together in the form of a signature, said leaves having parallel creases to form a back portion on each leaf having an angular relation to the plane of the leaves when the book is closed and said creases being gradually brought nearer together from the outer to the middle leaves of the book, substantially as described.

CHARLES J. TAYLOR.

Witnesses:
WM. O. BELT,
W. N. MURRAY.