

(Model.)

T. C. RANSHAW.

BOOK.

No. 387,918.

Patented Aug. 14, 1888.

FIG. I.

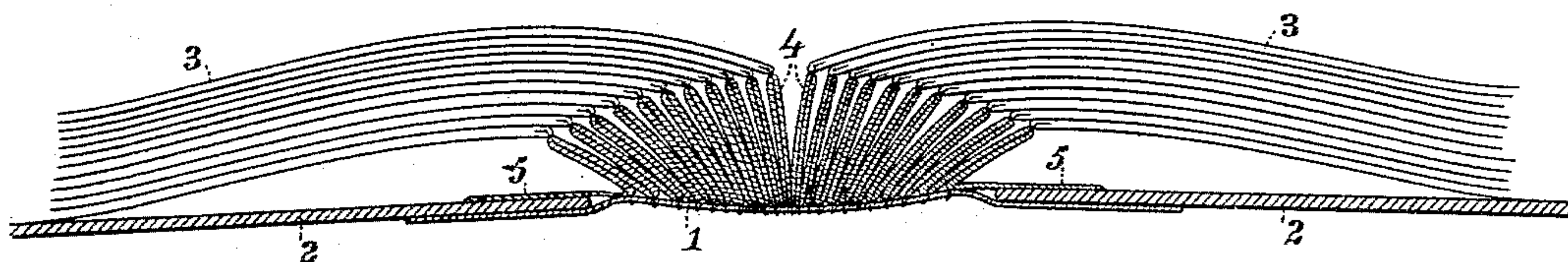


FIG. II.

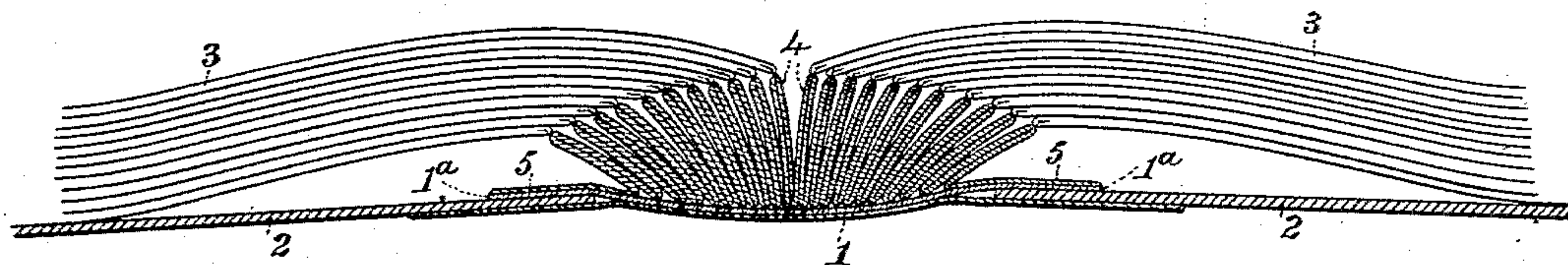
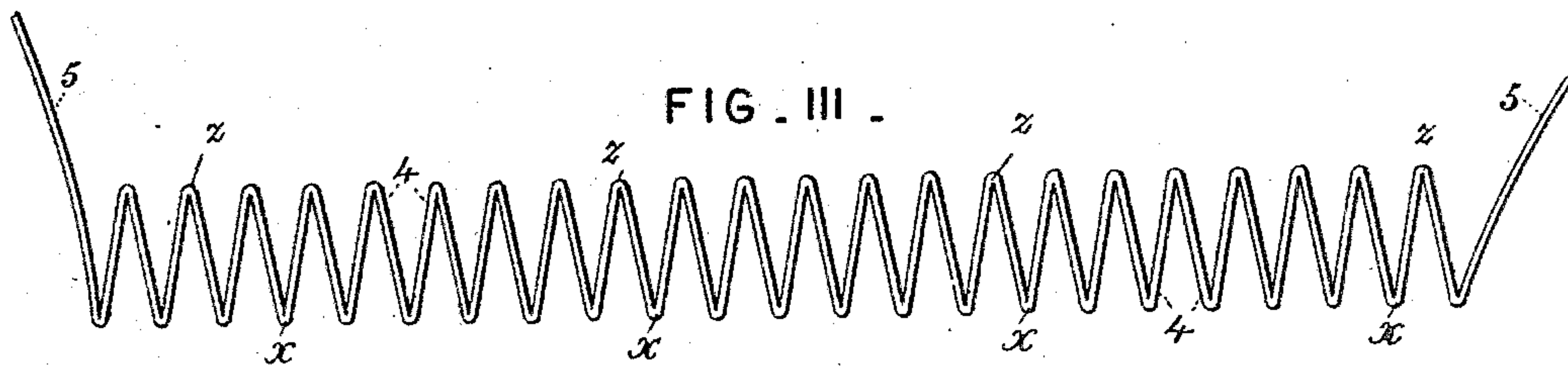


FIG. III.



Attest.

Geo. T. Smallwood.
[Signature]

Inventor:

Thos. C. Ranshaw.

[Signature]
By *[Signature]* Attys.

UNITED STATES PATENT OFFICE.

THOMAS C. RANSHAW, OF CINCINNATI, OHIO, ASSIGNOR TO CARPENTER
& RANSHAW, OF SAME PLACE.

BOOK.

SPECIFICATION forming part of Letters Patent No. 327,918, dated August 14, 1888.

Application filed April 27, 1887. Serial No. 236,345. (Model.)

To all whom it may concern:

Be it known that I, THOMAS C. RANSHAW, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Books, of which the following is a full, clear, and exact description.

This invention relates to that class of books whose leaves, instead of being attached directly to the cover, the back-lining, or the bridge-strips, are attached to stubs, which latter are in turn attached to such cover, back-lining, or bridge-strips, whereby two hinge-like or flexible joints are formed, the object being to allow the book to lie perfectly flat wherever opened. This double hinge-like joint I do not claim, broadly, as my invention, because I am aware that it has been proposed to secure each signature of a book to one edge of a stub-strip whose other edge is in turn secured to the cover of the book, a separate stub-strip being provided for each signature.

I am also aware that it has been proposed to construct newspaper-files of two cover-leaves to which are secured the respective ends of a strip of leather or other flexible material crimped or folded alternately in opposite directions, each of the crimps or folds presented inward being provided with a number of loose cords extending nearly its entire length and designed to be placed between the leaves of the paper to be filed for the purpose of holding it, while none of the crimps or folds which are presented in the opposite direction (or toward the back of the file) are in any manner secured to anything.

I am also aware of the devices shown in Patents No. 185,066, granted on the 5th of December, 1876, to B. J. Beck, and No. 244,357, granted on the 12th day of July, 1881, to Binnechere and Cochard, and do not claim as my invention anything therein shown and described; nor do I claim, broadly, in this application "stub-strip" formed of a single sheet of material crimped or folded alternately in opposite directions and having the bent or curved portions which unite the folds at their rear extremities secured to the cover of the book either mediately or immediately, such broad claim being the subject of my application, Serial No. 211,405, filed August 20, 1886.

The present invention consists in a book having its leaves or signatures secured to stubs formed of a single strip of flexible material crimped or folded alternately in opposite directions, the bent or curved portions which unite the folds at their extremities which are presented in one direction (toward the back of the book) being secured directly to the said back, the term "back" as here employed comprehending that portion of the cover which lies between the cover-leaves, whether it be formed of a single ply of material or more.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a section of an open book embodying my invention, each of the several bent or curved portions which unite the folds at their rear extremities being shown attached directly to the back of the book. Fig. II is a similar view showing each of the several bent or curved portions which unite the folds at their rear extremities secured to a back-lining or a strip placed interiorly with respect to the back proper. Fig. III is a detail view of the stub-strip.

The cover of the book is composed of the back 1 and the cover-leaves 2, the back being made either without a lining, as shown in Fig. I, or with a lining, 1^a, as shown in Fig. II. This lining consists simply of a single strip of tough yet flexible material extending the entire length thereof, or several narrow strips interior to and extending across the back transversely, having their ends secured to the cover-leaves.

3 represents the leaves of the book, which are preferably arranged together in folios, groups, or "signatures;" but the manner of grouping the leaves together is immaterial, so far as my present invention is concerned.

4 represents a number of stubs to which the leaves of the book are secured, said stubs being in turn secured to the back of the book. These stubs are constructed in the manner described in my application above referred to—that is to say, a single continuous sheet of canvas or similar tough yet flexible material is crimped or folded alternately in opposite directions at uniform distances throughout its

length, (except at its extreme ends, which are preferably left straight for attachment to the cover-leaves of the book,) so as to produce by purely mechanical means, and with the greatest
5 expedition and accuracy, a zigzag strip such as represented by Fig. III of the drawings. The bent or curved portions z , which unite the several folds at their extremities which are presented in one direction, have the leaves 3 of
10 the book secured to them, while the bent or curved portions x , which unite said folds at their extremities which are presented in the opposite direction, are secured by stitching or otherwise to the back, either by stitching
15 through and through the back, as shown in Fig. I, or only through the back-lining, as shown in Fig. II. So far as my present invention is concerned, the parts 1, 1^a, and 2
20 may be secured together in any desired manner. The extreme ends of the strip of material of which the stubs are formed are preferably left straight and uncrimped, as shown at 5, for attachment to the cover-leaves 2.

It will be observed that the stub-strip is no-
25 where stitched through the folds, because this would interfere to a greater or less extent with the flexibility of the joint so made, but that it is always stitched through those bent or curved

portions which unite the several folds, whereby the greatest possible flexibility is obtained. 30

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A book having a back, a number of stubs formed from a single strip of material crimped 35 or folded alternately in opposite directions, and a series of folios, signatures, or leaf-groups, the rear crimps of said stub-strip being stitched directly to the back, leaving the front crimps free, and each leaf-group being stitched to a
40 separate front crimp, substantially as set forth.

2. A book having a back, a number of stubs formed from a single strip of material crimped or folded alternately in opposite directions, said stubs being secured to the back of the 45 book by stitches passing directly through the bent or curved portions which unite the rear extremities of said folds, and the folios, signatures, or leaf-groups secured to the bent or curved portions which unite the forward ex- 50 tremities of the folds, substantially as and for the purpose set forth.

THOMAS C. RANSHAW.

Witnesses:

GEO. H. KNIGHT,
ALFRED HILL.