

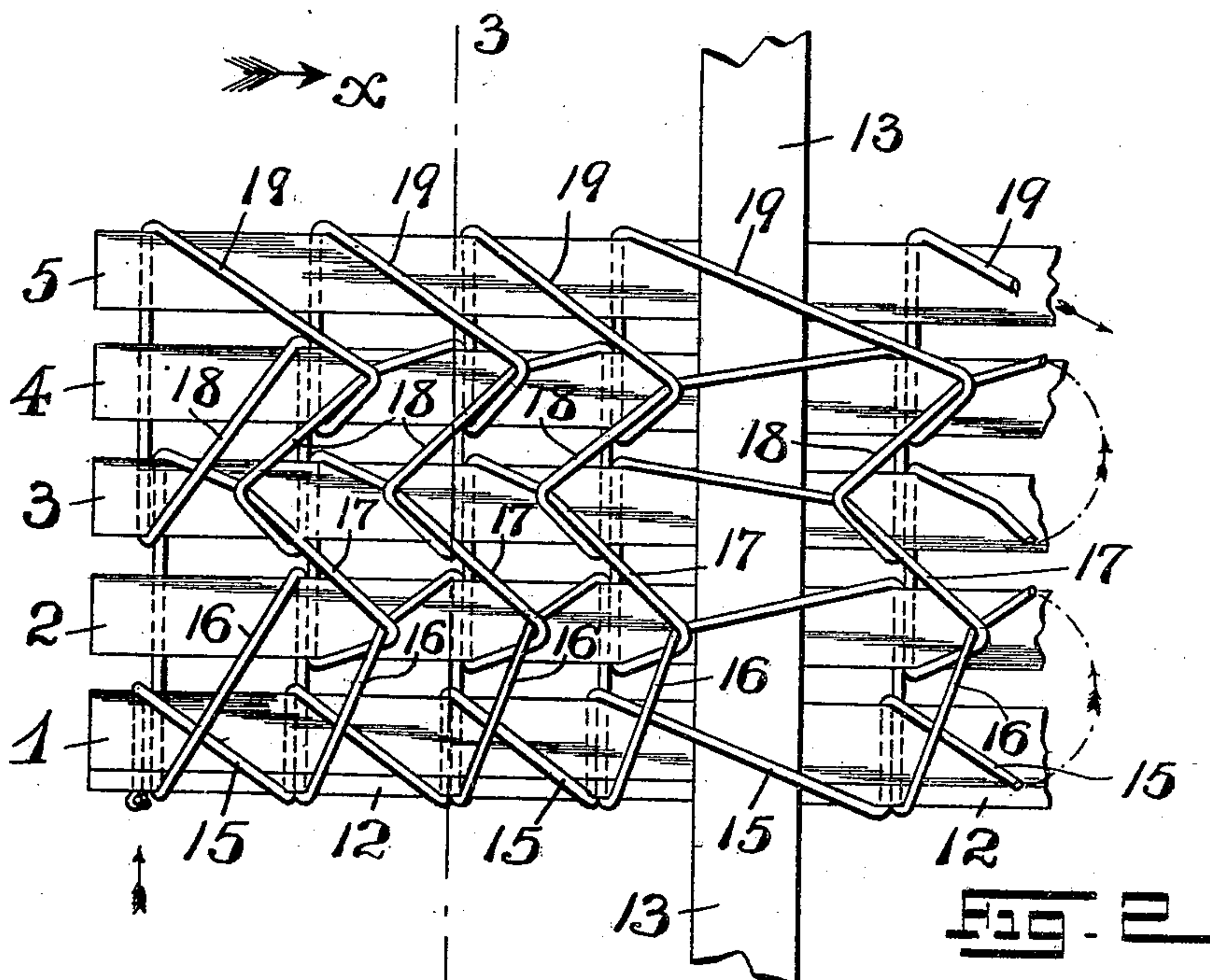
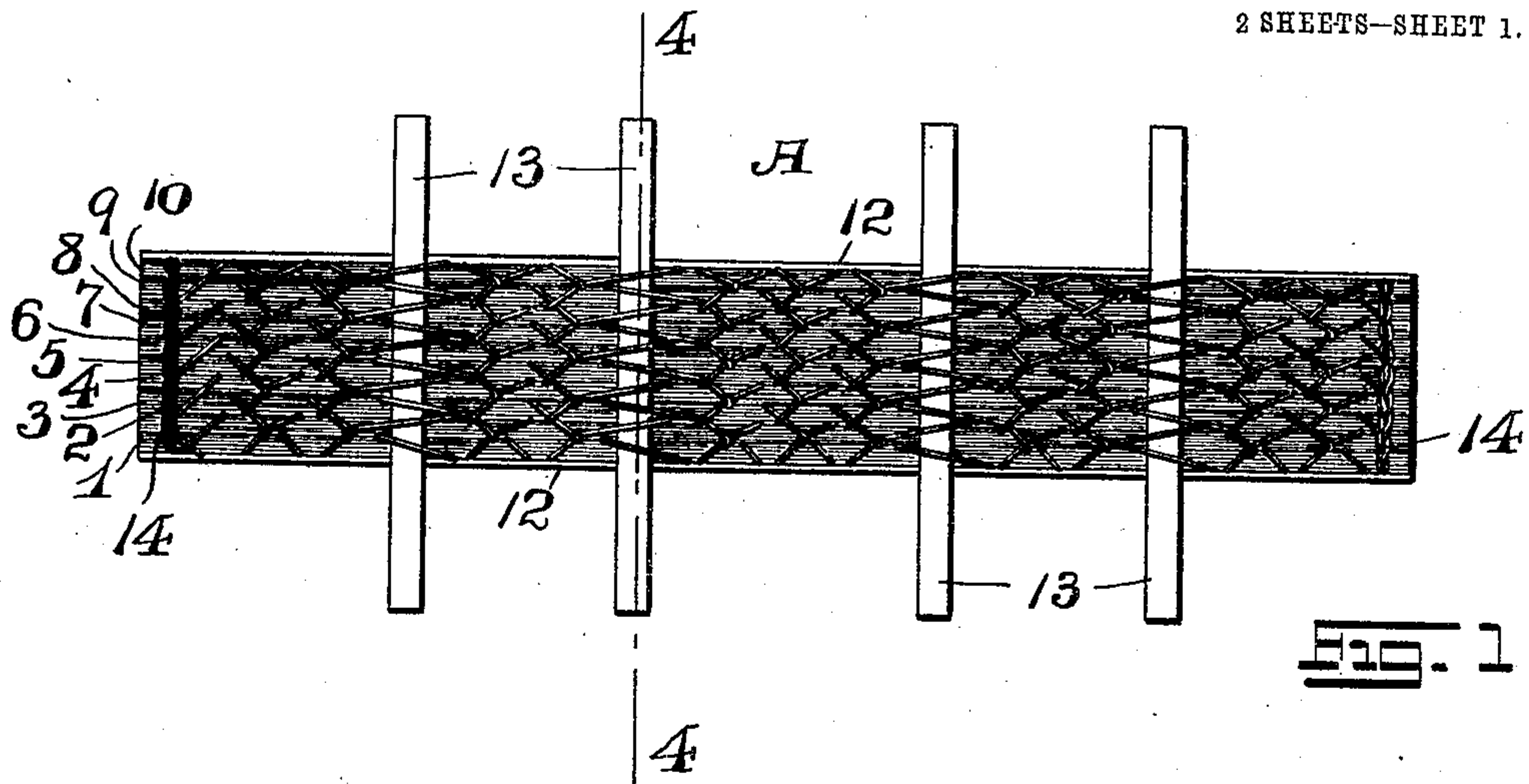
No. 886,726.

PATENTED MAY 5, 1908.

W. H. RADEMAEKERS.
BOOKBINDING.

APPLICATION FILED SEPT. 26, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

F. H. W. Fraentzel
Anna H. Alter

INVENTOR:

William H. Rademaekers
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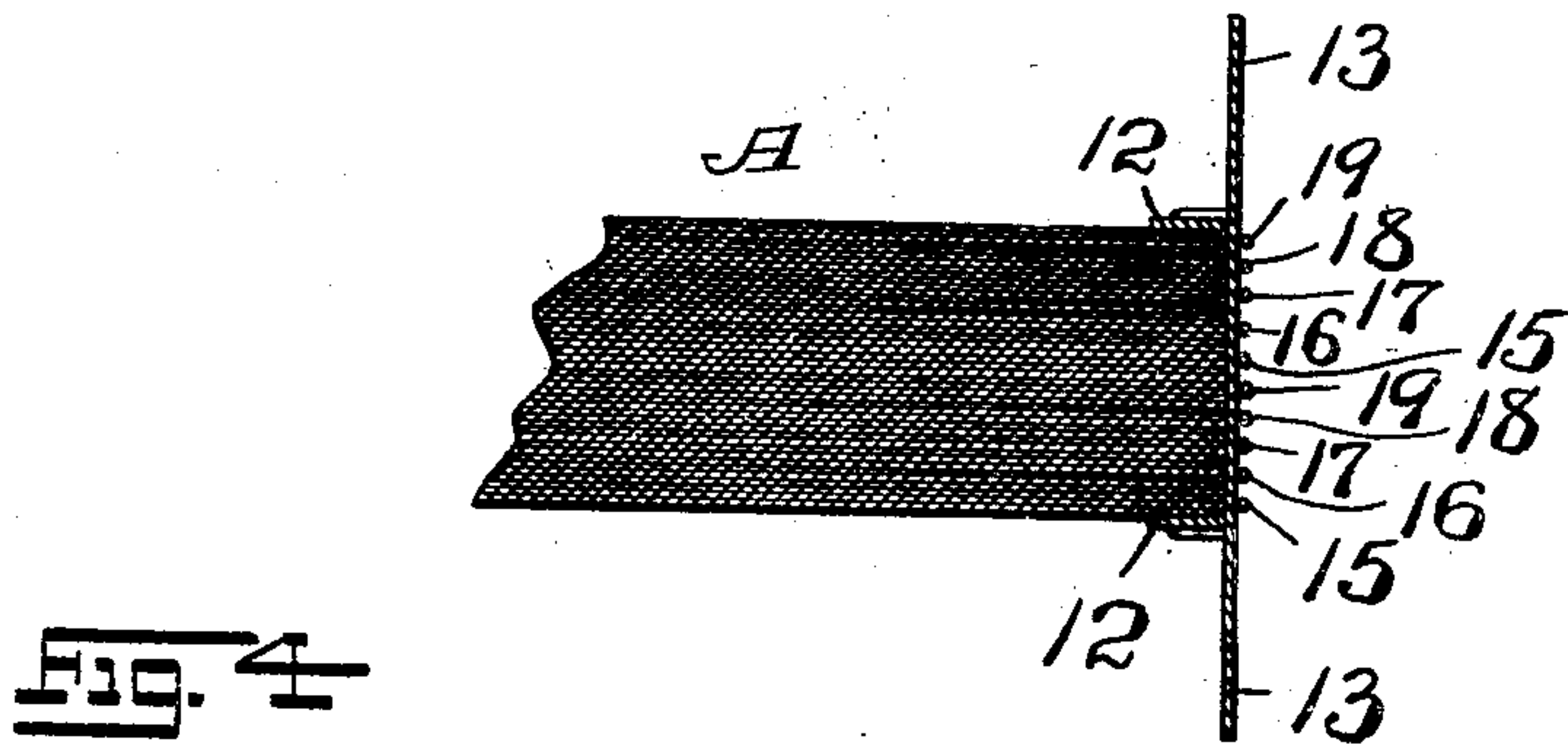
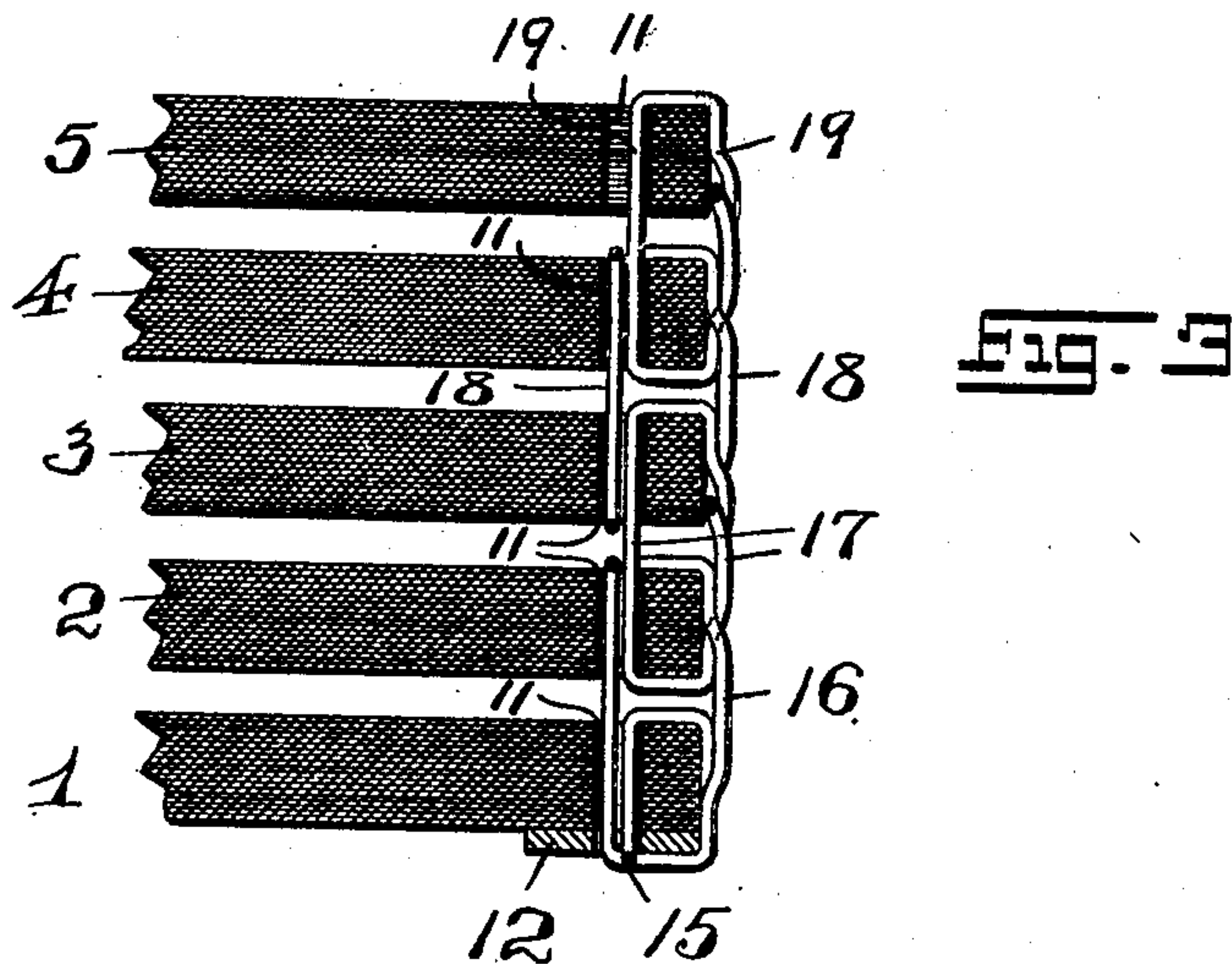
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UNITED STATES PATENT OFFICE.

WILLIAM H. RADEMAEKERS, OF NEWARK, NEW JERSEY.

BOOKBINDING.

No. 886,726.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed September 26, 1907. Serial No. 394,642.

To all whom it may concern:

Be it known that I, WILLIAM H. RADEMAEKERS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bookbinding; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The present invention relates, generally, to improvements in book-binding; and, this invention has reference, more particularly, to a novel means of binding and securing together the several signatures or sections of a book, prior to the final binding operation.

The invention has for its principal object to provide a book, the single sheets of which are secured together in a much stronger manner than has been done heretofore by the ordinary method of stitching employed in book-sewing.

A further object of the present invention is to provide a strong, simple, and secure book-stitching or binding, whereby the single leaves or pages of the book are secured together in such a manner that the book may be opened flat from the center at any point or page between the covers of the book.

The present invention consists in such novel arrangements and combinations of parts as will be more fully described in the following specification, and then finally embodied in the clauses of the claims which are appended to and which form an essential part of this specification.

The invention, which is designed to be used on new books, as well as on old books, which are subject to considerable hard usage, as in circulating libraries, is illustrated in the accompanying drawings, in which:

Figure 1 is a back edge view of the leaves of a book stitched together by the novel stitching embodying the principles of the present invention. Fig. 2 is a large detail of one end of the same, greatly exaggerated and shown in a diagrammatic manner, to more clearly illustrate the self-binding or tightening features of the novel stitching. Fig. 3 is a detail vertical cross section of the same, shown in the same manner, and taken on line 3—3 in said Fig. 2, looking in the direction of

the arrow *x*; and Fig. 4 is a detail vertical section, taken on line 4—4 in said Fig. 1.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring to the several figures of the drawings, the reference character A indicates the body of a book made up of any number of small quantities of leaves, forming several signatures or sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, etc.

The book is made up as follows:—The single sheets having been arranged in their proper order are glued together at their backs in the ordinary and well known manner, and having been thus glued together, they are then broken apart into signatures or sections and then punched with stitch-receiving holes 11 near and in line with their back edges. When this has been done the first signature or section 1 is provided on the first or bottom leaf with a tape 12 glued along its edge to prevent the stitches from breaking or tearing through the tender paper. The first signature or section 1 is then set up in the sewing-bench, so that the back edges abut against the binding-tape or cords 13 held therein. The needle containing a thread, cord, or fine wire, is then inserted in the first stitch-receiving hole in said section 1 and in practice a lock or tie-stitch 14, as shown in Fig. 1, is made. In Fig. 2, however, a single knot is shown so as not to confuse the following of the line of thread.

After the tie-stitch 14 is made, the thread is brought down and around the back edges of the section 1 to the next hole, and the needle is inserted in the bottom thereof. The thread is then carried through the hole to the top, thus forming a stitch 15, and so on until the opposite end of section 1 is reached, where another tie-stitch 14 is made. Section 2 is now placed above section 1, and the thread is carried up through the first hole and then down across the back of both sections 1 and 2, and then up through the holes in said sections 1 and 2, to the top of section 2, forming stitch 16; and, so on, until the opposite end is reached. The section 3 is then placed on top of section 2 and the thread is carried up through the hole in said section 3 to the top of said section 3, where it is brought down across the back of the sections 3 and 2. The needle is then slipped under the stitch 16 which binds or secures together the two sections 1 and 2, and then up through

the stitch-receiving holes in the sections 2 and 3 to the top of the section 3, thus forming a stitch 17. The thread is then drawn tight and in so doing it will be readily seen that it automatically takes up any slack or looseness in stitch 16, thereby providing a self-tightening or binding stitch. The stitch 17 is carried in this manner across the back of the sections 2 and 3, until the opposite end is reached, whereupon the section 4 is added on top of section 3, and said section 4 is secured to the section 3 by means of the stitch 18, which is caught around stitch 17 in the manner above described, in order to tighten and bind said stitch 18 in the same manner as the said stitch 17 tightened and bound the stitch 16. In the same manner, where the section 5 is added, the above-mentioned section 4 is secured thereto by means of the stitch 19, and said stitch 19 is in turn made to tighten and bind the stitch 18. In this manner, section by section may be sewed until the book is completed.

It will be noticed from an inspection of the drawings, that in stitching the sections together, whenever a binding tape 13 is reached, the stitches are carried around or across the same, whereby the binding-tape is held in its proper position, and finally securely fastened when the finishing glue is applied to the back of the sections in the ordinary manner.

From the above description and an inspection of the drawings, it will be clearly evident that the manner of stitching, which embodies the principles of this invention, provides a very simple, strong and desirable binding; and, one in which great flexibility is provided, so that the book will withstand a great amount of rough handling without loosening the leaves or injuring the binding.

Instead of stitching two sections together, and then a third to the second, and a fourth to the third, etc., I can secure three or more sections together in the same manner, and then keep adding one or more sections to those already secured together without departing from the scope or principle of my present invention.

I claim:

1. In the art of binding books, a number of sections or signatures, a series of stitches sewed vertically through each section, said stitches extending upon the backs of said sections, the stitches of the one section being interlaced and angularly arranged with relation to the stitches of another section, substantially as set forth.

2. In the art of binding books, a number of sections or signatures, a series of stitches sewed vertically through each section, said stitches extending upon the backs of said sections, the stitches of the one section being interlaced and angularly arranged with relation to the stitches of another section, and

the interlocked stitches being tightened upon the backs of said sections, substantially as set forth.

3. In the art of binding books, a number of sections or signatures, a series of stitches sewed vertically through each section, said stitches extending upon the backs of said sections, the stitches of the one section being interlaced and angularly arranged with relation to the stitches of another section, and the stitches near the ends of each section being formed into lock or tie-stitches, substantially as set forth.

4. In the art of binding books, a number of sections or signatures, a series of stitches sewed vertically through each section, said stitches extending upon the backs of said sections, the stitches of the one section being interlaced and angularly arranged with relation to the stitches of another section, and the interlocked stitches being tightened upon the backs of said sections, and the stitches near the ends of each section being formed into lock or tie-stitches, substantially as set forth.

5. In the art of binding books, a pair of sections or signatures, a series of stitches sewed through said sections and extending upon the backs of said sections, and another section or signature arranged upon one of said pair of sections, stitches extending through said last-two mentioned sections or signatures, and the stitches of the sections being angularly interlaced upon the backs of the sections, substantially as set forth.

6. In the art of binding books, a pair of sections or signatures, a series of stitches sewed through said sections and extending upon the backs of said sections, and another section or signature arranged upon one of said pair of sections, stitches extending through said last-two mentioned sections or signatures, the stitches of the sections being angularly interlaced upon the backs of the sections, and all of said interlaced stitches being tightened upon the backs of the various sections, substantially as set forth.

7. In the art of binding books, a pair of sections or signatures, a series of stitches sewed through said sections and extending upon the backs of said sections, and another section or signature arranged upon one of said pair of sections, stitches extending through said last-two mentioned sections or signatures, the stitches of the sections being angularly interlaced upon the backs of the sections, and the stitches near the ends of each section being formed into lock or tie-stitches, substantially as set forth.

8. In the art of binding books, a pair of sections or signatures, a series of stitches sewed through said sections and extending upon the backs of said sections, and another section or signature arranged upon one of said pair of sections, stitches extending

through said last-two mentioned sections or signatures, the stitches of the sections being angularly interlaced upon the backs of the sections, and all of said interlaced stitches
5 being tightened upon the backs of the various sections, and the stitches near the ends of each section being formed into lock or tie-stitches, substantially as set forth.

9. A book consisting of a number of sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, etc., in which section 2 is secured to section 1, and section 3 is secured to section 2, section 4 to section 3, and so on, each section being secured to the next adjacent section by means of a
15 stitch interlacing with and tightening the stitch which secures together the two preceding sections, whereby the complete body of the book is formed.

10. A book comprising a series of sections 20 punched with stitch-receiving holes, two of said sections being stitched together through said stitch-receiving holes, a third section being stitched to one of the first two sections, a fourth section being stitched to one of said
25 three sections and so on, the said stitches interlacing upon the backs of the said sections so as to secure them all together, substantially as set forth.

11. A book comprising a number of sections or signatures, said sections being arranged in series one upon the other and connected by interlacing stitches extending upon the backs of said sections, said stitches being formed by a continuous thread first
35 sewed through the leaves of one signature, and then sewed through the leaves of the next adjacent signature and then through the leaves of both signatures, substantially as and for the purpose set forth.

12. A book comprising a multiplicity of sections or signatures, said sections being arranged in series one upon the other and connected by interlacing stitches extending upon the backs of said sections, said stitches
45 being formed by a continuous thread first sewed through the leaves of one signature, then sewed through the leaves of the next adjacent signature and then through the leaves of the first-mentioned signature and then
50 continuously through the next two signatures directly above said first-mentioned signature, and then sewed through the leaves of

said two signatures directly above the first-mentioned signature, substantially as and for the purposes set forth. 55

13. A book comprising a multiplicity of sections or signatures, said sections being arranged in series one upon the other and connected by interlacing stitches extending upon the backs of said section, said stitches
60 being formed by a continuous thread first sewed through the leaves of one signature, then sewed through the leaves of the next adjacent signature and through the leaves of the first-mentioned signature, then through
65 the leaves of said first-mentioned signature and continuously through the next two signatures directly above said first-mentioned signature, then sewed through the leaves of said two signatures directly above the first-
70 mentioned signature, and finally sewed through said two signatures and the leaves of the next upper signature above said two signatures, substantially as and for the purposes set forth. 75

14. A book comprising a multiplicity of sections or signatures, said sections being arranged in series one upon the other and connected by interlacing stitches extending upon the backs of said sections, said stitches being
80 formed by a continuous thread first sewed through the leaves of one signature, then sewed through the leaves of the next adjacent signature and through the leaves of the first-mentioned signature, then through the leaves
85 of said first-mentioned signature and continuously through the next two signatures directly above said first-mentioned signature, then sewed through the leaves of said two signatures directly above the first-mentioned signature, then sewed through said two signatures and the leaves of the next upper signature above said two signatures, and finally
90 sewed through the leaves of said next upper signature and the uppermost of said two signatures, substantially as and for the purposes set forth. 95

In testimony that I claim the invention set forth above I have hereunto set my hand this 23rd day of September 1907.

WILLIAM H. RADEMAEKERS.

Witnesses:

FREDK. C. FRAENTZEL,
F. H. W. FRAENTZEL.