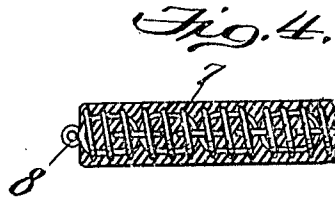
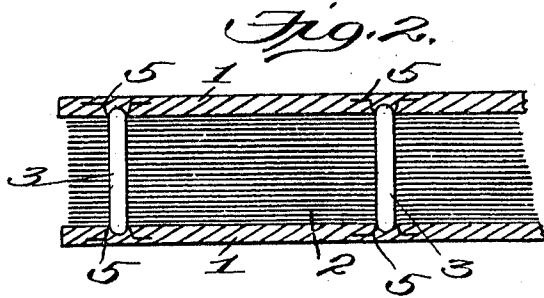
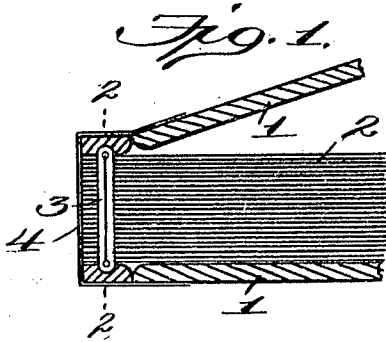


C. B. SMITH.
FLEXIBLE BINDING DEVICE.
APPLICATION FILED NOV. 24, 1908.

950,354.

Patented Feb. 22, 1910.



Witnesses:

Ed. Kesler
J. B. [unclear]

Inventor
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By James L. Norris

att'y.

UNITED STATES PATENT OFFICE.

CHARLES BOWTELL SMITH, OF DUNEDIN, NEW ZEALAND.

FLEXIBLE BINDING DEVICE.

950,354.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Application filed November 24, 1908. Serial No. 464,307.

To all whom it may concern:

Be it known that I, CHARLES BOWTELL SMITH, a master printer, a subject of His Majesty the King of Great Britain, residing at 91^a Princes street, Dunedin, in the British Dominion of New Zealand, have invented certain new and useful Improvements in Flexible Binding Devices; 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.

This invention relates to new and useful improvements in book binding devices and more particularly to devices intended as substitutes for the stapling or sewing ordinarily employed, the present device being in the nature of an expansive band, usually rubber, and reinforced in such a manner as to allow for reasonable and necessary expansion of the rubber but to prevent the overstraining thereof. The ultimate purpose of the arrangement is to provide binding devices whereby the books or bound leaves shall open "flat" without any injury to the binding.

The invention is shown in detail in the accompanying drawings wherein—

Figure 1 is a sectional view showing the binding device in use. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a sectional view illustrating one form in which the binding devices shown in Figs. 1 and 2 may be made. Fig. 4 is an elevation of a modified form of binding device.

Similar characters of reference designate corresponding parts throughout the several views.

Referring more particularly to the drawings, the numeral 1 indicates the covers of a book and the numeral 2 the leaves thereof. For convenience the covers may be made in sections, as shown in Fig. 1, and the binding devices, designated generally by the numeral 3, are connected to the stationary inner sections of the covers and are passed transversely through holes in the leaves, these holes being of suitable form.

The numeral 4 indicates a suitable back-

ing to conceal the inner edges of the leaves and to connect the covers.

The binding devices 3 are indicated diagrammatically in Figs. 1 and 2 and in these figures are shown as being in the form of continuous bands, the ends of which are embedded in the covers and are retained by staples, as 5. The bands may be reinforced in any suitable manner, as for example, by the chain device shown in Fig. 3, in which a plurality of connected chain links, as 6, are embedded in the band, the links 6 being so proportioned as to permit of the necessary expansion of the band and to prevent such expansion beyond a certain degree and thereby to prevent any overstraining.

In the form of the invention shown in Fig. 4, there is combined with the chain links a spiral spring, as 7, the spring 7 being arranged to surround the links and, with the latter, being incased in the band. In this form the band, instead of being constructed as a continuous loop, as in Figs. 1 and 2, may consist of a straight section and to the end chain links, eyes, as 8, may be secured. The eyes 8 are embedded in the covers 1 and are retained by the staples 5 which pass therethrough.

Having fully described my invention, I claim:

1. The combination with a pair of covers and leaves held therebetween, of binding devices attached to the covers and passed transversely through the leaves, each binding device comprising an elastic band and a reinforcing chain embedded therein and normally slack.

2. The combination with a pair of covers and leaves held therebetween, of binding devices passed through the leaves and comprising continuous elastic bands and staples embedded in the covers and passed through the bands.

In testimony whereof, I affix my signature, in presence of two witnesses.

CHARLES BOWTELL SMITH.

Witnesses:

HENTON MACAULAY DARBY,
JOHN STUART.