

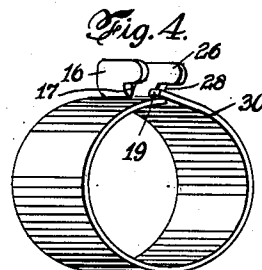
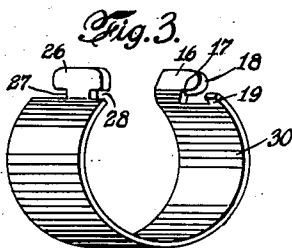
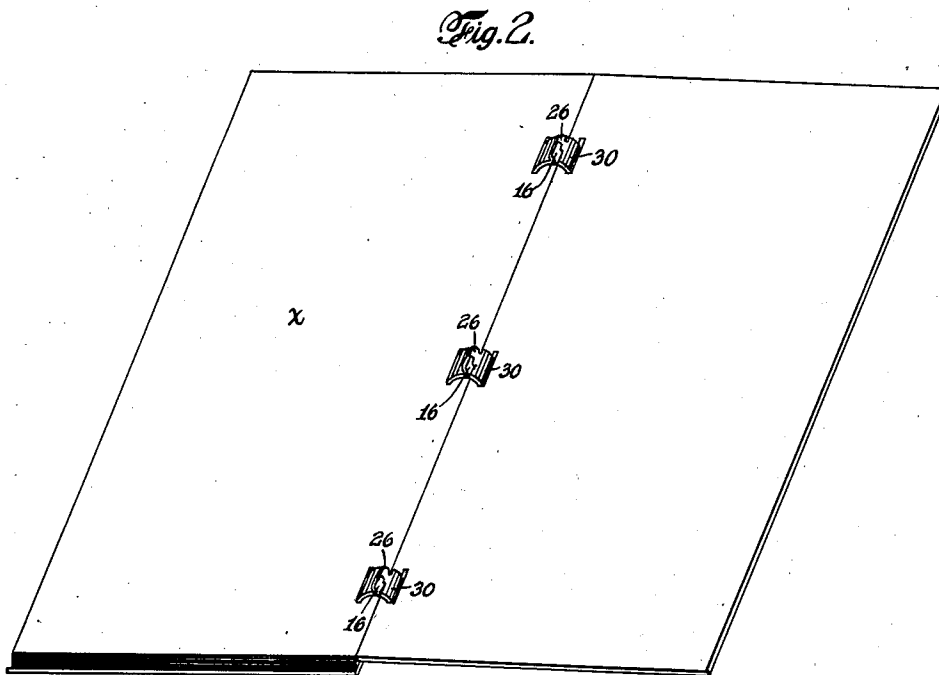
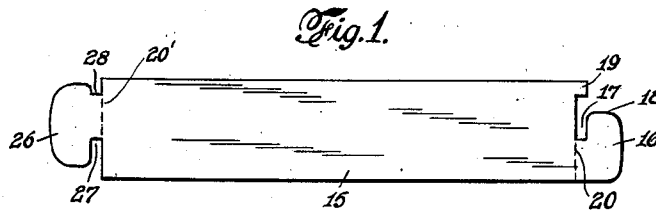
July 15, 1941.

R. TAUBER

2,249,064

SELF-LOCKING TUBULAR BINDER

Filed Aug. 5, 1940



INVENTOR.
RUDOLF TAUBER

BY

Warren E. Willis.

UNITED STATES PATENT OFFICE

2,249,064

SELF-LOCKING TUBULAR BINDER

Rudolf Tauber, New York, N. Y.

Application August 5, 1940, Serial No. 351,527

5 Claims. (Cl. 129—1)

This invention relates to binding devices as used in securing the pages of loose-leaf books of a wide variety.

An object of the invention is to provide binders which will retain the pages in perfect alignment, permit the book to open flatly at any place between its pages, and which cannot discolor or deface the sheets by staining.

A further feature is in the provision of a tubular binder that permits easy insertion and removal of pages, and is self-locking when applied, whereby the pages are securely held from accidental or inadvertent displacement.

Another purpose is to produce a tubular binder in any selected color, preferably, but not necessarily, of non-metallic material, flexible, tough and strong, of pleasing appearance and economical to produce.

These highly advantageous objects are attained by the novel and practical construction and arrangement of unitary parts hereinafter described and illustrated in the accompanying drawing, constituting an essential component of this disclosure, and in which—

Figure 1 is a plan view of the blank prior to its finished formation.

Figure 2 is a perspective view of a conventional book shown open, its leaves held by binders made in accordance with the invention.

Figure 3 is a perspective view of a binder in an open position.

Figure 4 is a similar view of the same shown with its ends engaged.

The blank, showing in a greatly exaggerated scale in Figure 1, is composed of a flat strip, of uniform thickness and width, die cut at one end to produce a tab 16, curved at its outer edge and partially separated from the main portion of the blank by a narrow transverse recess 17.

One edge of the tab is level with the edge of the strip, while its opposite edge 18 reaches approximately to three-quarters of the width of the strip.

A prong 19 extends outwardly from the same end of the strip, from its opposite edge, the length of the prong corresponding to the width of the recess 17, over which it extends.

In register with the rear edge of the recess 17, and demarking the prong 19 from the main portion of the blank, is a bending line 20.

At the opposite end of the blank is a similar tab 26 partially separated from the main portion by a narrow transverse slot 27 reaching in from the edge of the strip oppositely the recess 17, and opposed to the slot is a notch 28, which, as

will afterwards be seen, is adapted to receive the prong 19.

A bending line 20' extends across the end of the blank in alignment with the inner edges of the slot 27 and notch 28, corresponding to the line 20.

After blanking, the strip is formed to present a tubular loop 30, having radially extending ends formed by bending the tabs 16 and 26, and prong 19 outwardly, these elements, due to the resiliency of the material, permitting its ends to be offset laterally, as indicated in Figure 3; the tab 16 is entered in the slot 27, while the tab 26 is correspondingly entered in the recess 17, forming in effect interengaging hooks.

This is accomplished by passing either end of the curved strip through a narrow slot in the rear margin of the book X, springing the prong and adjacent portion of the strip outwardly, in which condition the tabs easily intersect in the spaces 17, 27 by lateral pressure, after which, upon releasing the prong it engages by its inherent resiliency in the notch 28, forming a positive lock; obviously a reversal of these operations release the lock whenever desired.

Thereafter, by suitable manipulation, the prong 19 snappingly engages in the notch 28, locking the ends of the strip against separation until the prong has been forcibly released.

Other means may be employed to retain the end elements of the strip in rigid juxtaposition, such as cements suited to the material used, and like devices.

The radial outstanding elements 16, 26 may be placed between the covers of the book X and its pages, between the pages, or otherwise as may be preferred, acting to align the binders.

It is to be noted that a book thus bound may be opened flatly, the leaves completely turned over, and that they are held in registration at all times positively preventing the pages on either side from shifting endwise.

If made on non-metallic material, rusting is impossible and consequent staining of the pages; it is also apparent that, due to the diversity in color of the material, really novel and attractive, as well as reliable, results are attainable; however the binders are not restricted to such material.

What is claimed as new and sought to secure by Letters Patent is:

1. A loose-leaf binder comprising a strip of flexible material curved longitudinally into a tubular form having interengageable radially ex-

tending end tabs, and means to normally lock said tabs when interengaged.

2. A loose-leaf binder comprising a strip of flat flexible non-metallic material curved longitudinally into a tubular form, opposed hook-like tabs on opposite end edges of said strip, said tabs bent to extend radially and adapted for interengagement, one end of said strip having a notch, and a prong on the opposite end of said strip to engage said notch when said tabs are interengaged. 10

3. A loose-leaf binder comprising a strip of flat flexible non-metallic material curved longitudinally into a tubular form, tabs integrally connected in opposed relation to the ends of said strip, said strip having intervening recesses, and one end having a notch spaced from its recess, and a prong on the opposite end of said strip to snappingly engage said notch when said tabs are interconnected, said tabs and prong bent to 20

extend radially outward from the tubular form.

4. A loose-leaf binder comprising a flat strip of resilient material formed tubular in cross section with its end edges normally disconnected, tabs extending radially outward from said end edges and adjacent the opposite side edges of said strip, said tabs being hook shaped and adapted for interengagement, and notch and prong elements on said strip to lock said tabs when in operative engagement.

5. A loose-leaf binder comprising a strip of resilient material curved longitudinally, hook shaped tabs on the proximate ends of said strip adapted for intersection and bent to extend radially outward, a notch in the edge of said strip at the juncture of one of said tabs and strip, and a spring prong on the opposite end of said strip adapted to be lockingly engaged in said notch upon the intersections of said tabs.

RUDOLPH TAUBER.