

No. 661,223.

H. C. MILLER.

Patented Nov. 6, 1900.

**BOOK LEAF.**

(Application filed Jan. 13, 1899.)

(No Model.)

Fig. 1.

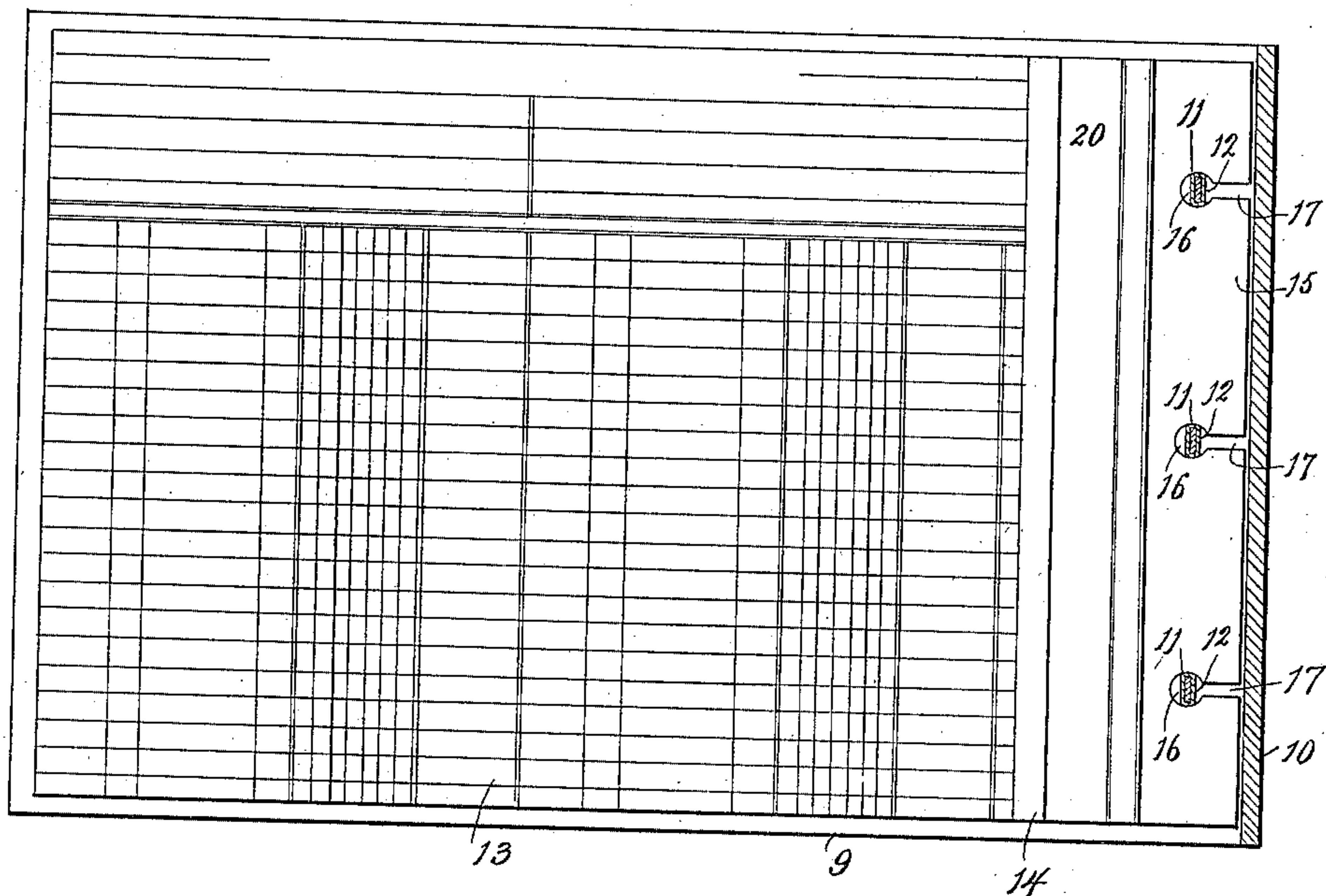
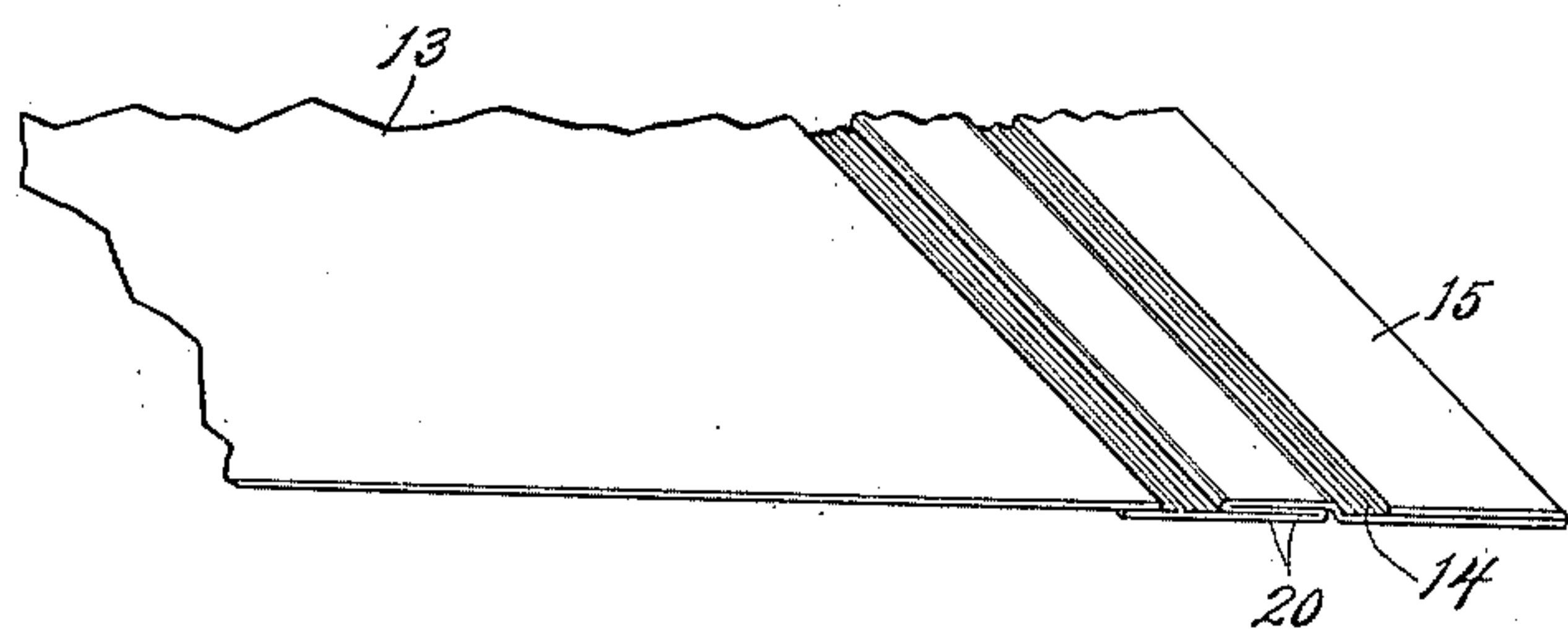


Fig. 2.



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

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## BOOK-LEAF.

SPECIFICATION forming part of Letters Patent No. 661,223, dated November 6, 1900.

Application filed January 13, 1899. Serial No. 702,047. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. MILLER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and  
5 useful Improvement in Leaves for Books or Book-Binders, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

10 My invention has relation to improvements in leaves for books or book-binders.

The invention relates more particularly to that class of leaves which are used in connection with temporary binders, said leaves  
15 being placed and detachably secured between the side pieces forming the cover of the binder.

Leaves of the character referred to are usually provided with a hinge to facilitate turning, said hinge being formed of linen, muslin, or other flexible material secured at its inner edge to the rear edge of the leaf and at its outer edge to a reinforcing-strip composed of a material of a less flexible nature, said  
25 reinforcing-strip being provided with openings which are adapted to receive the mechanism of the binder, to thereby permit the leaves to be inserted or removed. It has been found in practice that hinge-joints thus  
30 formed are objectionable owing to their tendency to buckle, curl, or crumple, particularly when opening a leaf.

It is therefore the object of my improvement to provide, in connection with a hinge-joint of the class described, a means to prevent buckling, curling, or crumpling of the material of which the hinge is composed; and to this end the invention consists of the construction and arrangement of the parts or  
40 their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a horizontal section of a binder, between the sides of which my improved form of leaves  
45 are inserted; and Fig. 2 is a perspective view of one of the improved leaves.

I have shown my improved form of leaf in connection with a temporary binder similar to that covered in United States Letters Patent issued to myself and Julius Bauer for improvements in temporary binders, No.  
50 587,986, dated August 10, 1897. It will be un-

derstood, however, that the leaves are not necessarily restricted to use in connection with this particular form of binder, but may  
55 be adapted for use in connection with almost any form of binder or book.

Referring to the drawings, the numeral 9 indicates one side piece of the cover, which side piece is provided at its rear edge with a  
60 back piece 10. It will be understood that there is another side piece (not shown) similar to the side piece 9, and these two side pieces, together with the back piece 10, constitute the complete cover. One of the side  
65 pieces is shown as provided with projecting revoluble tubular posts 11, and projecting revoluble bars 12 extend from the other side piece and are adapted to telescope into the posts 11.  
70

The numeral 13 indicates the detachable leaf. To the rear edge of this leaf is connected, preferably by a suitable paste or glue, a flexible strip 14, composed of muslin, linen, or other desirable flexible material. Across  
75 the rear portion of this flexible strip 14 is pasted, glued, or otherwise suitably secured a reinforcing-strip 15, said strip thereby providing a stiffer or less flexible portion, in which openings 16 for the posts are formed.  
80 Where two-part posts of the character herein described are employed, the openings 16 are provided with straight slots 17, extending through the rear edge of the reinforcing-strip, so as to provide for the leaves being readily  
85 withdrawn out of engagement with the posts when it is desired to remove the leaves or pushed inwardly into engagement with said posts when it is desired to secure a leaf in the cover. These openings 16 are so positioned on the reinforcing-strip as when the  
90 leaves are inserted in place between the side pieces of the cover to register with the upwardly-extending posts.

The portion of the flexible strip 14 between  
95 the inner edge of the reinforcing-strip 15 and the outer edge of the leaf proper is, owing to the material of which said strip is formed, of a flexible character, and hence a hinge-joint is thereby formed to permit a leaf to be readily  
100 turned out onto an opened side piece of the cover of the binder or book. As stated at the outset of the specification, however, these flexible hinge-joints in practice have been



found open to objection owing to their tendency to buckle, curl, or crumple. My present invention therefore consists in the provision of means for obviating this disadvantage by providing longitudinally of the flexible hinge-joint a stiffening device. This stiffening device consists of a reinforcement extending longitudinally of the flexible hinge-piece, said stiffening-piece being of less width than the flexible hinge-piece and so arranged with relation thereto as to leave portions of the flexible hinge-piece exposed on opposite side edges of the stiffening-piece. It will be obvious that by this construction the hinge-joint is still preserved, while at the same time the stiffening-piece effectually prevents the objectionable buckling or curling of the hinge-piece referred to.

The stiffening device is formed as an integral part of the hinge-strip 14. To provide for this, I employ a hinge-strip of sufficient width, and intermediate of the side edges of the strip I fold or double said strip one or more times, as clearly shown, and paste the fold or folds to the body of the strip. Fig. 2 shows two of such folds, and I have designated the same by the numerals 20 20. These

folds of course extend longitudinally of the strip, and when secured together and to the main body of the hinge-strip form an effective stiffening device, which will accomplish the objects sought to be secured by my invention.

What I claim as my invention is—

A loose leaf for a book or binder consisting of a main flexible portion, a rear supplemental flexible portion and a hinge portion comprising a flexible strip forming a connection between the rear edge of the main portion and the inner edge of the supplemental portion, said hinge portion being provided with a stiffening device of less width than and extending longitudinally of the flexible strip of the hinge portion, and consisting of one or more longitudinal folds in the flexible strip forming the hinge portion, said fold or folds being secured to the main body of the hinge portion.

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

HENRY C. MILLER.

Witnesses:

A. L. MORSELL,  
ANNA V. FAUST.