Feb. 21, 1933. J. SCHADE ET AL 1,898,215

LOOSE LEAF BINDER

Filed June 24, 1932 2 Sheets-Sheet 1

Fig. 1.

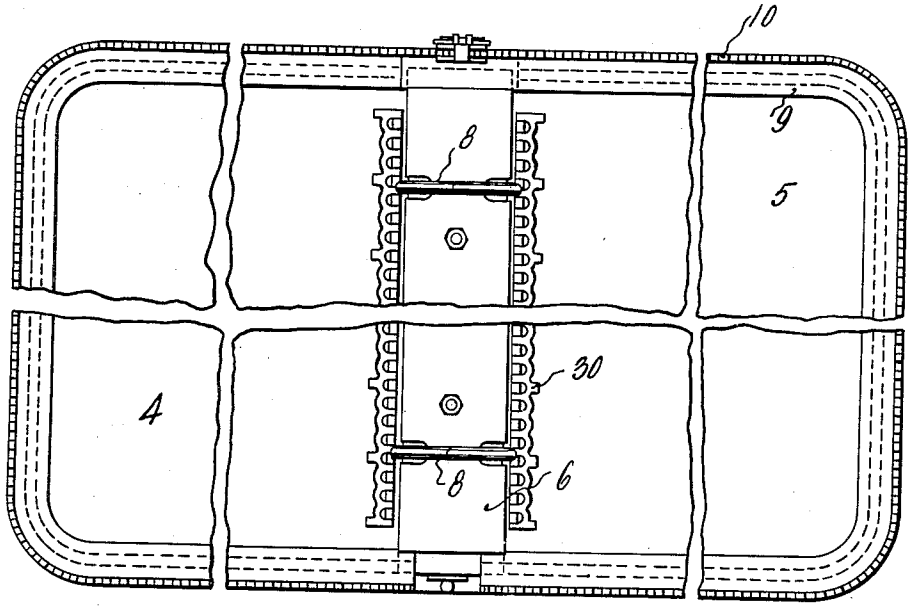


Fig. 2.

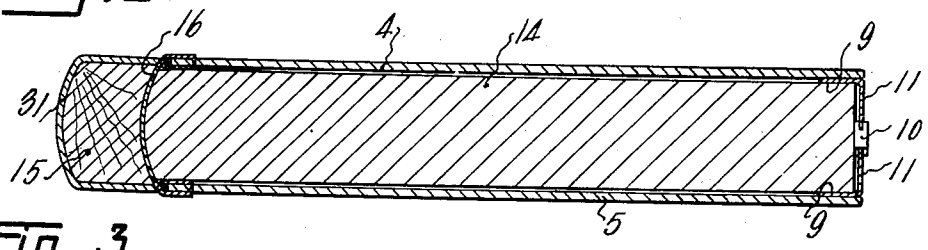
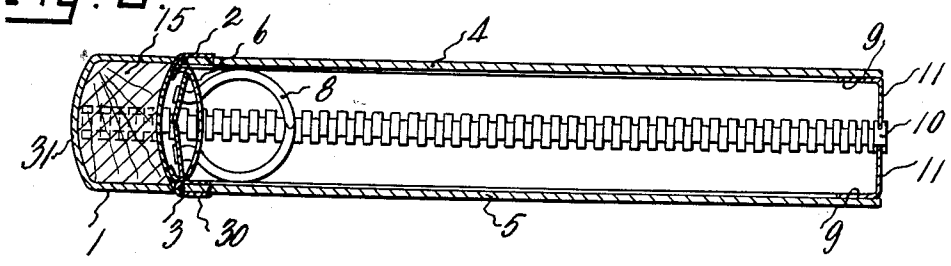


Fig. 3.



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Fig. 4.

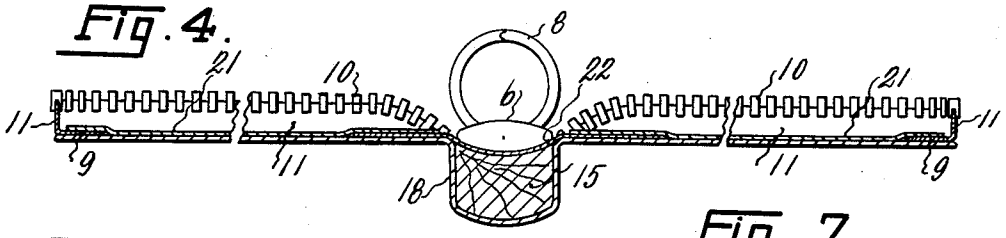


Fig. 5.

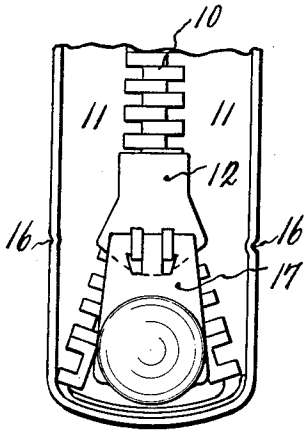


Fig. 6.

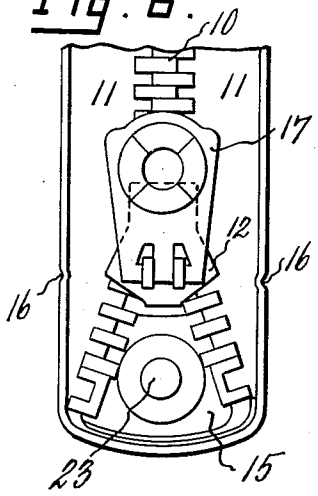


Fig. 7.

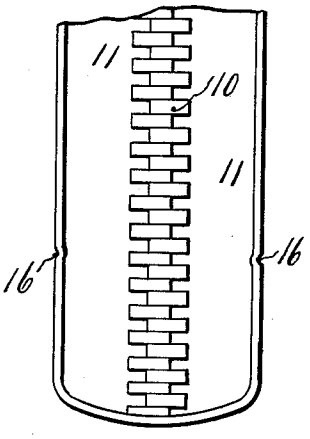


Fig. 8.

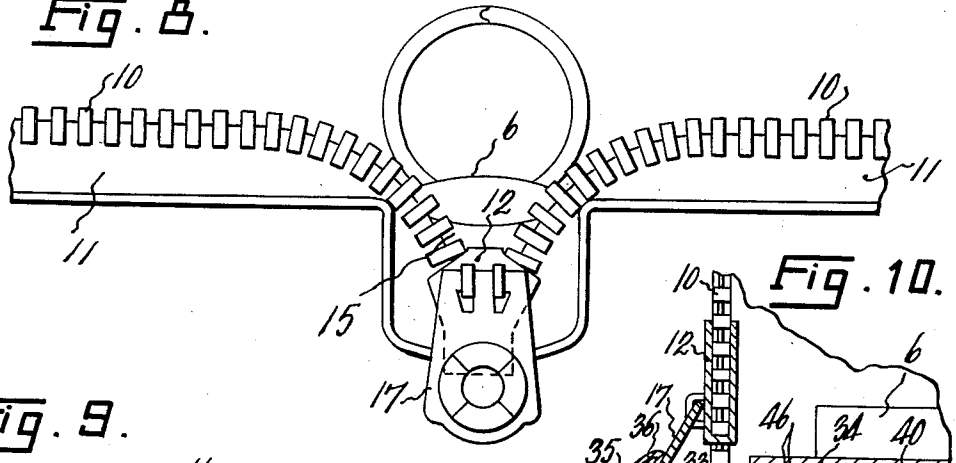


Fig. 9.

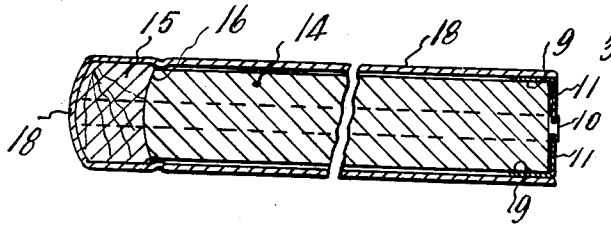


Fig. 10.

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1,898,215

UNITED STATES PATENT OFFICE

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LOOSE LEAF BINDER

Application filed June 24, 1932. Serial No. 619,040.

This invention relates to an improved loose leaf book or binder and to the method of making it with so-called hookless or zipper or slide fastening means adapted to close the gap between the top and bottom covers when desired. We are aware that the use of zipper fasteners has been extended to all sorts of devices opening like a book. Our copending case, Ser. No. 572,558, filed November 2, 1931, shows them applied to a loose leaf book.

The idea of the present invention is not the mere extension of zipper fasteners to the edges of a loose leaf book, but it is to rearrange the structure of a loose leaf book, particularly the construction and arrangement of the back portion on which the covers hinge, the manner of attaching the zipper fasteners to the covers, and relating the fastener parts to the book parts so as to make an improved combination for use that is simpler and more bookish in appearance and that will work better that other zipper fastened loose leaf books now on the market and, if desired, one that can be locked in closed position without having the lock parts obtrusive and in the way when not needed. It is also our plan to disclose the method of making the improved book. We claim both method and product as improvements.

According to one feature of invention we construct the book for the zipper fastener means (by which we mean any of the many makes of slide or hookless fasteners) so that it can be opened out perfectly flat and without extending the area of the two hinged cover parts beyond the normal book area for covering the contents. Heretofore in the application of zipper fasteners to loose leaf books the area of the covers has been extended substantially beyond the normal book cover area so as to accommodate the zipper fastening means with respect to its line of attachment and separation in a smooth manner. The prior practice has resulted in the need for a good deal of extra material for the covers which has been expensive and the extra material has been objectionably prominent in giving the book a larger appearance than its real capacity warranted, and in other ways departed from the normal bookish appearance.

According to another feature the zipper fastener strips (usually of cloth with metal prongs on one edge) are fastened to our cover edges so as to have the exposed portions of the strips lie in a plane at right angles to the plane of the hinged covers. By this construction the edges of the covers are not used to bend over the book contents, but are kept in the same plane as the body of the cover material. The only part arranged at right angles to the cover edges is the material of the zipper fastener means, and it is used to cover the gap between the top and bottom covers all around the book except at the back when the book is closed.

In arranging and assembling the parts of a loose leaf book that is to be closed and opened by a zipper fastener, we have found a lot of difficulty in the manufacturing steps. One difficulty is that the zipper fastener means requires a lot of care in getting the prongs to match up with the same number on opposite strips and in proper alignment. Another difficulty is that the fastener means, in pulling the edges of the book into closed position, frequently cramps the parts. This causes the book parts to warp out of position to accommodate the necessary alignment of the zipper fastener at its edges or line of fastening prongs. In our method invention we will disclose the steps of manufacture which economically overcome these and other difficulties and which make certain that the assembled book and zipper fastening means will have the accurate relationship desirable for smooth working without distortion of any part of the book, particularly along the cover edges.

There are many other features of improvement that require much detailed attention, particularly with respect to the construction at the back of the book. These will be brought out in the detailed description of the accompanying drawings which disclose the various aspects involved and will be pointed out in the claims.

In the drawings—

Fig. 1 is a top plan view of our loose leaf

book in wide open position without any contents on the loose leaf structure;

Fig. 2 is a sectional view of certain book parts of Fig. 1 on a building form during the process of manufacture;

Fig. 3 is a transverse sectional view of the closed book cover;

Fig. 4 is a transverse sectional view of a fully opened book cover; the hinger construction in this view is slightly different than in Figs. 1 to 3;

Fig. 5 is a partial end elevation of the book at the open end of the fastener with the fastener closed, and finger piece locked;

Fig. 6 is a view similar to Fig. 5 with finger piece unlocked and raised;

Fig. 7 is a partial end elevation of the book at the closed end of the fastener with fastener closed;

Fig. 8 is a partial view of the same end of the book as in Fig. 7 but with the parts opened up and the covers turned back;

Fig. 9 is a sectional view of certain book parts of Fig. 4 on a building form during the process of manufacture; and

Fig. 10 is a detail sectional view showing a means to lock the book.

Referring to Fig. 3, the book comprises a particular type of back portion 1 which is preferably rigid up to the hinge lines 2 and 3 where the covers 4 and 5 are attached for turning. These covers may be either flexible or stiff, as the manner of combining and arranging the "zipper," hookless, or slide fasteners to this book makes the fastening parts function independently of the cover flexibility or stiffness.

The upper part of the back is slightly concave to receive the metallic loose leaf structure 6 of a usual kind. This may be fastened to the back by attachment to the wooden filler piece 15 or in other ways not shown in detail. The rings 8 receive the punched filler sheets in the usual manner and hold them so as to turn out and lie flat against either cover. This is arranged for conveniently by having the bottom edges of the filler sheets held slightly above the plane passing through the hinge lines for the covers. The area of the covers is preferably the normal area desired to merely cover the top and bottom sheets of the filler pack when the book is closed. No additional area of any account is required in the cover material for the purpose of closing the gap around the edges of the book. The covers preferably extend beyond the filling sheets just about far enough to accommodate the lines of stitches indicated by dotted lines in Fig. 1. The gap between the covers is closed by the material of the "hookless fastener" strips 11 that extend at right angles to the covers, as indicated in Fig. 3.

The strips made up of portions 9 and 11 (see Fig. 3), in the usual form, are cloth strips having metal prongs 10 along one edge. In the book of Fig. 3, we attach the cloth of portion 9 to the edge portion of the book cover in overlapping relation. The side 11 of the same strip carrying the prongs is bent at right angles to the plane of the cover and to the portion 9. Each strip is fastened to its cover in the same manner. Thus a cross-section through the strip in attached position makes a right angle, the free portion of which carries the prongs 10 on each cover of the book. This prong-carrying portion or side of the strip 11, as shown, is of sufficient extent to cover half the thickness of the book contents or pack of filler sheets. As indicated in Figs. 2 and 3, a strip portion 11 is arranged around the border of each cover so as to lie at right angles to the plane of its cover at all times. The fastener strips are ordinarily made of cloth and when we describe them as having their free portions 11 extending at right angles to the cover planes we mean that they are attached to the covers in this position so that they will take such right angle position without cramping or puckering. They will not have the same uniform position as if they were made of stiff metal but the idea is the same, even though they are of cloth. The latter lets them bend enough for the passage of the slide around the corners, as we will describe. But after the fastener slide 12 operates to fasten the strips together along adjacent prong edges the portions 11 are brought into the right angle positions described and the attaching "hookless fastener" means lies between the covers of normal area without any parts needing to extend beyond said area to accomplish the idea of closing the gap between the covers when the loose leaf book is filled and closed. The idea is shown in Fig. 3 but the filler sheets are not shown as they would hide the arrangement of the structure.

Heretofore (as shown in our copending case) the plan for using "zipper" or "hookless fasteners" to completely close a loose leaf book has involved a special form of cover having much more than the normal area for the book's contents. This has been expensive as the cover material of these books is costly. Furthermore, the prior construction has required a special appearance more like a brief case than a book.

The problem of the present invention has been to get a book construction that gives the normal loose leaf book appearance and to which the "zipper" construction can be applied efficiently and economically without excrescences that detract from the simple bookish appearance. We have found that in manufacturing books with "zipper fasteners," one must take much greater care in assembling the book parts in proper position than is necessary in making a book without the fastener. Slight errors in the positioning of the parts will result in cramping and distor-

tion of the finished book since the operation of the "zipper" slide will pull the book parts into position required for the closure line in the "zipper" structure. Slight errors that would be of no account without the "zipper" operation are magnified into serious objections when the "zipper" construction and operation are involved in the same loose leaf book. For example, if the covers are offset slightly in their assembly on the back, the closing of the zipper will pull and cramp the covers to the position needed for the closing line. The slight error in cover position at one point will frequently be magnified by leverage to a large error of position at another point on the cover. The flexibility of the "zipper" strips also makes it difficult to get each one in proper position to line up right for the prongs to register. The strips tend to stretch and it is this that frequently puts the book parts out of proper position. This trouble tends to unduly increase the expense of making "zipper" closing books.

For these reasons we have by experiment devised a method of assembling and fastening the parts of our present structure together that enables the ordinary worker to make the new book without trouble. The description of this method will also disclose details of the book structure not yet mentioned.

Referring to Fig. 9, we take a block of wood 14 for a building form or tool. We place the first book part, the book back wooden filling piece 15 (see Fig. 2 also), against the back of block 14 with the parts fitting as on line 16. The "zipper" parts consisting of two cloth strips with prongs 10 are fastened together along the line of the prongs. The single strip thus formed of the two separable strips is wrapped around the block 14 and around the ends of piece 15, with the terminal portions each extending against the back of 15 and secured there as by tacks or adhesive. In the beginning the portions 9 are parallel with portions 11 and extend above and below the block 14. When the strip is tensioned enough to lie smoothly in position around the block 14 and piece 15, the portions 9 are turned over (see Figs. 3 and 9) and in this position are lightly pasted or cemented (as by rubber cement) at the edges of form 14, all the way around. This temporarily holds the fastener parts in the position desired for them in the ulimate book product when they function to complete the closure of the book.

With the zipper strips in accuratedy assembled position with the edges turned over on the block or form, we may take a piece of flexible leather 18, large enough to serve for both covers and for covering the back of the book as well, with hinge lines at joint line 16, and lay this leather around the parts as indicated in Fig. 9. The edges of the covers are then preferably attached all around to portions 9, as by glue or cement. Such attachment is made stronger than the one of the portions 9 to the wood block 14. The parts as shown in Fig. 9 can then be put in a book press so as to fix them in position by pressure. When the cement has set, the "zipper" slide is operated to open up the prongs along the fastening line. The cover sections (separating easily from the slightly cemented lines on block 14) are turned back, and form 14 is removed. Then the portions 9 may be stitched to the cover material for greater security than the glue or cement will give, as indicated by dotted lines in Fig. 1. Such stitching is done after the parts have been assembled and fastened in the desired positions and there is no chance for misalignment of parts.

Referring to Fig. 4, when the book is opened up the metallic loose leaf structure 6 with rings 8 can be attached to the back piece 15 with strips 21 and 22 placed in the book to cover joints and improve the inside appearance. Figs. 5, 6, and 7 indicate how the terminal portions of the fastener strips are arranged. When the book is closed, the strips extend across both ends of back piece 15 and also extend around these ends between material 18 and the back piece 15. One end is shown in Fig. 7. The other end is indicated in Figs. 5 and 6 where the prongs terminate in full view and only the cloth of the strips is carried around between 15 and 18. Fig. 5 also shows the fastener slide 12 with finger piece 17 pivoted to it and provided with the female part of a snap fastener, the male part 23 of which is fastened to the end of back piece 15. A comparison of Figs. 5 and 6, both of which show the same end of the closed book, will make it clear how we have provided for the finger piece 17 to close over this terminal part of the "zipper" and fasten the slide 12 by the two snap fastener parts. The neat appearance of Fig. 5 after the snap fastener is used to fix the parts in their final position at this end as compared to Fig. 6 shows one advantage of the particular closing arrangement we have described.

When the book is opened, as indicated in Figs. 1 and 4, the terminal ends of the "zipper" strips (as will be clear from the Figs. 5, 6, and 7) are located well below the hinge lines of the covers. From this point they open up gracefully and unobtrusively and turn into the upright position shown in Fig. 4, all around the edges of the covers as an upstanding flange. The only flexibility required in our construction is provided for by the cloth strips of the "zipper" construction. The covers may be flexible or stiff. But it is important to have the back portion extend downwardly a substantial distance below the cover hinge lines, as in Fig. 8. The importance of doing this is well shown in Figs. 5, 6, and 7 where the terminal portions of the

"zipper" strips are all shown below the hinge lines 16 far enough to be securely attached without interference with the desired action at the hinge lines.

We have taken advantage of the fact that we have terminal facilities for the "zipper" construction below the hinge lines, by building (with piece 15) a substantial backbone to serve as the back of the book. This forms a good hand hold on the book when it is open which is quite convenient. But, as shown in Fig. 4, the loose leaf book disclosed is essentially of the type in which the contents can be laid out perfectly flat on either inside cover face as distinguished from a book in which the leaves are held bound into a back having about the same general cross-section as the piece 15. Such book back shapes are not unusual. They have a bookish appearance. But we call attention to the fact that the principal reason for the book back structure we have used is to accommodate the "zipper" construction to a type of loose leaf book construction that would ordinarily be made without the back shape made by our piece 15. For example, in the book of Fig. 4, if it were not for our desire to use the "zipper" fastener, the outside surface of the back would be close to the bottom of the loose leaf structure 19 at about the curve of strip part 22. The back part 15 and the U-shaped part of 18 would ordinarily be omitted. We use the back construction shown to make a new combination of good bookish appearance, in applying the "zipper" construction to a loose leaf book such as the ring binder type. But of course the type of metallic loose leaf structure could be varied.

It is of particular advantage in a loose leaf book to have an upstanding flange around the cover edges when the book is opened out flat. The "zipper" strips supply such a flange in our book. They are sufficient to hold unbound sheets on the covers and yet flexible enough so as not to be in the way, as stiff flanges would be.

The hinge construction of Figs. 1, 2, and 3 is somewhat different from that made of a single covering piece for back and covers, as shown in Fig. 9. We show a form of commercial hinge 30 made of metal with pintles 2 and 3 at the hinge lines. In this case the covers 4 and 5 do not extend around the back part 15. Instead the latter may be separately covered (or left uncovered) as by a part 31 which may be of hard cover material such as molded fiber, giving a different appearance to the book and one of greater strength and rigidity to the back portion. But the general manner of building the hook in Figs. 2 and 9 is the same.

Instead of using the ordinary snap fastener for the slide in its closing position we may use a lock. And the presence in our construction of the rigid back piece 15 of large enough bulk at the end makes the book particularly adaptable for applying a lock in a special out of the way fashion.

On articles closed by a "zipper" fastener and locked by the "zipper" parts, the locking parts have heretofore been rather prominent and in the way. It is our plan and a detailed feature of the invention to apply the lock to our loose leaf book in a new manner that gives an exceedingly neat appearance. We are enabled to do this by coordinating the book parts with this in view. The plan is shown in Fig. 10.

The lock mechanism itself can of course be one of many types of construction. To disclose one way of combining a lock under our invention, we have made the lock appear very much like the snap fastener. The wooden back piece 15 receives the shank 40, the forward end of which is forked by being slotted as at 41. This provides two spring portions each provided with a hook-shaped head as 32 and 33. A cut-out space 34 permits movement of the spring portions. This part extending from back 15 and suitably fastened in the position shown, can be conveniently made by providing a metal pin with a head shaped like a rivet head. Then by cutting the slot 41 the spring portions are formed. The outer surface of the head is rounded like the male portion of a snap fastener. It is conveniently located in the same place as the snap fastener part 23, see Fig. 6. By this arrangement we can use the finger piece 17' for carrying a lock part 35 that looks just like the button or female part of a snap fastener. Part 35 is provided with interior shoulders 36 over which the heads 32 and 33 can hook for locking.

It will be clear from Fig. 10 that if 35 is pressed on parts 32 and 33 the latter will enter part 35 with a snap fastener action, but the shoulders will be engaged so the parts cannot be separated as a snap fastener can be. To separate the parts, a forked key with legs 46 is inserted in a suitable keyhole exposed at the side of the book back. These legs need to be V-shaped to a sufficient extent to spring the forked parts of shank 40 together enough so parts 32 and 33 will disengage shoulders 36 and part 35 can swing outwardly from its locking position. For convenience, Fig. 10 shows the position of the parts for the key 46 to enter from the side, but by merely turning shank 40 ninety degrees, the key can operate through part 15 from the back of the book.

The character of the locking parts, so far as appearance goes, is exactly like a snap fastener. The snap locking feature is added without apparently adding any parts to the book of the other figures. So, instead of having an obtrusive lock, one is provided that does not in the least detract from the

bookish simplicity we aim at in our construction with the "zipper" fastener means.

Having fully disclosed our invention, we claim:

1. In a loose leaf book of the ring binder type the combination of a rigid back portion large enough to provide a hand grip on the book when the covers are opened to lie flat in a single plane, and cover portions hinged to turn at opposite side edges of the back portion, loose leaf ring structure on the back portion to hold the bottom edges of loose sheets thereof in or in front of the plane of said side edges, "hookless fastener" means the operative strips of which are attached to extend normally at right angles to the plane of the covers and all around the free edges of the latter, but with their terminal portions extended beyond the hinged edges and back onto the back portion far enough to accommodate the fastener slide to the rear of said edges and out of the way against the end of the rigid back portion at the closed end of the run.

2. In a loose leaf book of the ring binder type in which the free edges of the covers are fastened and unfastened by cloth strips of "hookless fastener" devices and an operative slide, the combination of the cloth strips arranged with sufficient width so as to close the gap between the edges of the covers caused by any number of sheets in the book up to its full capacity and without bending the marginal portions of the covers, a back portion and cover portions hinged to the back portion, the latter being extended far enough beyond the plane passing through the two hinge lines to accommodate the terminal portions of the fastener strips so that the latter may be free enough to permit the book to open perfectly flat.

3. A loose leaf binder comprising a rigid back portion to which the loose leaf attaching means are fastened and to which covers are hinged so as to lie out in the same flat plane and hold any part of the contents in said plane, "hookless fastener" means having its strips attached to the edges of the covers and with its terminal portions at the closed end of the run attached to said rigid back and extending far enough to the rear of the plane of the cover hinge lines to accommodate the slide of the fastener means.

4. A loose leaf binder comprising a rigid back portion of U-shaped cross-section, a loose leaf structure fastened at the inner side of the back portion, cover portions hinged to the back portions along its inner edges, "hookless fastener" means having flexible strips and a slide, said strips being arranged along the free edges of the covers and at right angles to the plane of the book when closed and of sufficient width to cover the gap between the cover edges when the latter are held apart a distance equal to the capacity of the loose leaf structure, the end portions of said strips at the closed end of its run extending into overlapping relation with an end portion of the said rigid back a sufficient distance for the said slide to move to that end of the back portion into overlapping relation therewith and to the rear of the plane passing through the cover hinges, whereby the covers can be laid out flat in the same plane without being cramped by the fastener means or closed over the book contents with the gap between their edges closed solely by the fastener strips.

5. A loose leaf book of the ring binder type comprising a stiff back portion large enough to provide a hand hold when the book is wide open, covers hinged at the inner edges of said back portion, and "zipper" fastening means all around the edges of the covers and of sufficient width to close the gap between the two covers when the book is closed, the terminal portions of said "zipper" means extending across the end of the back portion at the closed end of the run so as to accommodate the "zipper" slide and permit the covers to open on their hinge lines when the slide is overlapping the end of said back portion.

6. In a loose leaf book of the type in which the covers and the contents can lie out perfectly flat and the covers of which are supplied with "zipper" fastening means to hold them in closed position, the combination of a back portion, loose leaf structure and covers fastened to the back portion with hinges at its side edges, "zipper" fastening means extending around the outside edges of covers and beyond the hinge lines far enough to overlap the ends of the back portion, the latter being of sufficient size to accommodate the "zipper" slide in overlapping relation to permit the book to open when the slide is in such relation at the closed end of its run.

7. A loose leaf book having in combination a back portion and covers, the back portion extending below the hinge line of the covers far enough to take the terminal portions of a "zipper" fastening means in flat superposed position across the ends of the back portion and a "zipper" fastening means extending across such ends and around the free edges of the covers, the exposed strips of such means lying at right angles to the covers so as to close the gap between the covers without distorting them, the slide of said fastening means being movable beyond the hinge lines of the cover and into overlapping relation with said back portion.

8. A loose leaf book, having top and bottom covers and a "zipper" fastening strip attached at the edge of each cover with a normal tendency to extend at right angles to the cover, a slide arranged in a plane at right angles to both covers, a back to which the covers are hinged and against the ends of which the terminal portions of the strips are laid to open up with the covers, said strips

having sufficient combined width when fastened together to close a gap between the top and bottom book covers substantially equal to the width of said book back.

9. A loose leaf book having a rigid back portion equal in width to the designed book capacity, a loose leaf structure on the upper side of the back portion, covers hinged at the sides of the loose leaf structure, and a "zipper" fastener strip attached around the edge of each cover with a free side to extend at right angles to the cover, the combined width of such free sides being substantially equal to the width of the book back, and a slide to close and open the fastener strips, said strips being extended across the ends of the book back far enough to accommodate the slide at the closed end of the run.

10. The combination of a pair of separable "zipper" fastener strips arranged to close by a slide into a U-shaped form in both length and cross-section, book covers, one attached to each strip to hold its U-shaped cross-sectional form, and a book back attached to the covers and to both strips at their terminal portions to hold their U-shaped form in length, said book back having substantially the same width as the channel of the U-shaped form of the strip in cross-section and having sufficient thickness for the slide of the fastener to follow the edges of the strips toward their terminal portions far enough to lie against the book back end at the closed end of the run and give the strips adjacent such terminal portion an easy hinging action with the covers when the strips are separated.

11. A loose leaf book with covers and hinge lines and having a rigid back portion with sides extending rearwardly from the hinge lines with the appearance of a permanently bound book on the outside, a slide fastener means the strips of which extend in opposed relation across both ends of the back portion and all around the edges of the covers with their free sides arranged at right angles to the plane of the respective covers and the slide of which has a part adapted to be locked at one end of the rigid back portion, a lock an operative part of which is contained within the space of said rigid back portion at one end and adapted to lock the slide once it is at such end, said lock having a key hole extending to the surface of said back portion of the book.

12. A loose leaf book with covers and hinge lines having a rigid back portion with sides extending rearwardly from the hinge lines with the appearance of a permanently bound book on the outside, a slide fastener means the strips of which extend in opposed relation across both ends of the back portion and all around the edges of the covers with their free sides arranged at right angles to the plane of the respective covers and the slide of which has a part adapted to be locked at one end of the rigid back portion, a lock a part of which is contained within the space of said rigid back portion at one end and adapted to lock the slide once it is at such end, said lock having a key hole extending to the surface of said back portion of the book, said lockable slide part being formed to lie flat against the end of the said back portion and hide the lock.

13. A loose leaf book with covers and hinge lines having a rigid back portion with sides extending rearwardly of the hinge lines with the appearance of a permanently bound book on the outside, a slide fastener means the strips of which extend in opposed relation across both ends of the back portion and all around the edges of the covers with their free sides arranged at right angles to the plane of the respective covers and the slide of which has a part adapted to be locked at one end of the rigid back portion, a lock a part of which is contained within the space of said rigid back portion at one end and adapted to lock the slide once it is at such end, said lock having a key hole extending to the surface of said back portion of the book, said slide part constituting the finger piece and a snap fastener head provided with interior locking shoulders and said lock having a split snap fastener portion with cooperating locking shoulders mounted on spring arms to enter the head and lock it.

14. The method of assembling parts in book making which consists of attaching two bands of slide fastener strips of flexible form together by operating the slide along their attachable edges, laying the composite band around a form having the shape of a book filler or sheet pile and so that the flexible edges of the band extend beyond the top and bottom planes of the form all around the front and side edges and with the slide fastener line located between said planes, attaching the ends of the band so as to hold the latter arranged with its fastening line in the position in which the slide is to operate in opening and closing a book by the fastener means, turning the extended edges of the band over into the adjacent top and bottom planes of the form, attaching the covers to the turned over edges, binding the band at the back of the book and operating the slide to separate the band into its component parts only after the band has been attached in said relative positions to the book parts.

15. The method of assembling a loose leaf book with a slide fastener which consists in laying a filler piece for the book back against the back of a building form having the shape of the full contents of the book, laying a flexible slide fastener band consisting of two strips each having metal prongs along one edge and a slide to join them. all joined together around the front, and side edges of the

building form at right angles to its top and bottom planes and with the outer edges of the band extending beyond said planes, turning said extending edges down into the said adjacent planes and temporarily fastening them in the turned down position, permanently attaching the band at the ends of said filler piece for separation by the slide over a part of said ends, attaching the covers to the turned down edges of the band with hinge lines at the edges of the filler piece, attaching the covers to the filler piece, and then operating the slide to open fastener strips, removing the building form and completing the building of the book with the parts already assembled as above stated for the foundation and consisting of the back, covers, and fastener means, all in the desired relative positions.

In testimony whereof we have affixed our signatures.

JOHN SCHADE.
FRANK S. SCHADE.