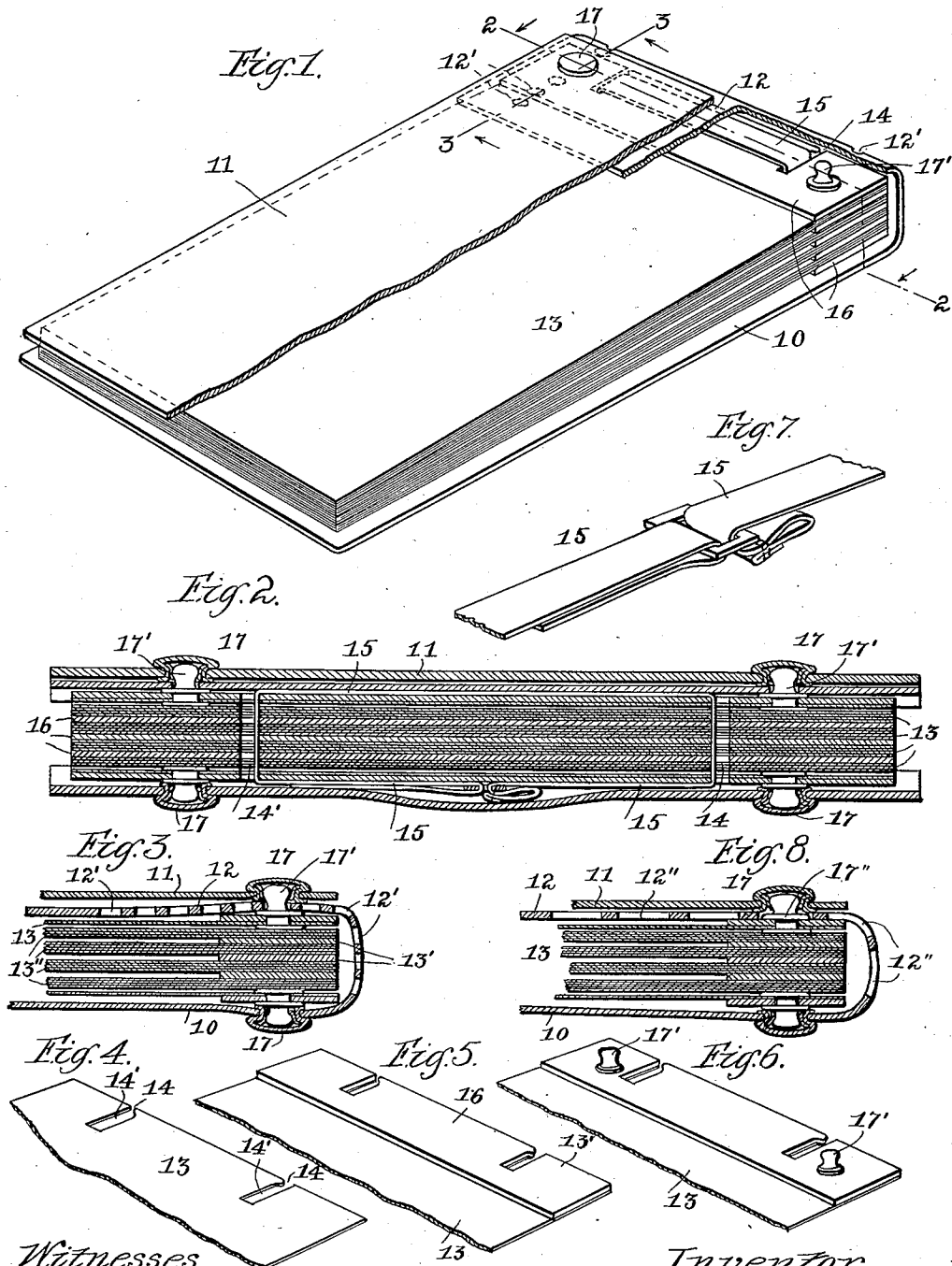


F. E. HOUSH.
 LOOSE LEAF BOOK.
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1,011,795.

Patented Dec. 12, 1911.



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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BOOK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK E. HOUSH, a citizen of the United States, residing at Winthrop, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Loose-Leaf Books, of which the following is a specification.

This invention relates to looseleaf books. The objects of the invention are to improve the construction, utility and adjustability of books of this sort, and to reduce the cost of manufacture. The details by which these objects are accomplished are set forth hereinafter.

Specifically the objects are to produce a book having the advantages of that illustrated in the accompanying drawings, which show a book of variable thickness in which the fastening extending from cover to cover such as has hitherto generally been thought necessary, is eliminated; in which the covers and back are quickly detachable from the contents and are expansible to fit varying thickness of contents, the back being held with a suitable degree of fullness; in which the sheets constituting the contents of the book are bound by a flexible band of varying length that does not require threading through the leaves as heretofore customary; in which the said tie may be drawn very tight without causing the leaves to bend or buckle under the stress, even though such leaves be few and flexible; in which the tedious and relatively expensive process of inserting space-making thicknesses of material between successive leaves in making an album or scrap-book is eliminated and a simple, quick process substituted which has the added advantage of preventing the aforesaid buckling; in which all the leaves and the cover are firmly held, yet allowing an individual leaf to be readily removed or inserted; and to accomplish the foregoing by methods of manufacture which are economical in labor cost, and which make a finished and esthetically pleasing product.

In the drawings, which illustrate the invention as it may be embodied in a photograph album, Figure 1 shows in perspective a book embodying the invention, lying bottom up; Fig. 2 is a rear elevation of the same in section on the line 2—2 of Fig. 1, on a larger scale; Fig. 3 is an elevation of a detail in section on the line 3—3 of Fig. 1, on a larger scale; Fig. 4 is a perspective of one form of leaf that may be used in the in-

vention; Fig. 5 shows the same with another detail added; Fig. 6 shows the same with still another detail; Fig. 7 shows a form of binder that may be used; and Fig. 8 shows a modification in a view similar to Fig. 3.

Referring to the drawings, 10 indicates the front cover and 11 the back cover of a looseleaf album. An extension 12 of the front cover forms the back of the album passing around the edges of the sheets or leaves 13 which are embraced between the covers in the manner hereinafter described. The sheets have slots uniformly shaped and placed, extending inward from the back. One shape that may be employed for such slots is shown at 14 where it will be noted that the slots extend in a direction which may in a general way be described as being parallel to the top and bottom edges of the album, each slot having a portion 14', which is in the nature of a niche or recess toward the other slot. When a number of sheets are assembled, a tie such as the band 15 may be passed through the slots embracing the intervening portion of the sheets, and when drawn tight will naturally be drawn into these niches. When thus tight the sheets cannot escape, notwithstanding that the slots remain open toward the back of the book. However, upon loosening the tie a single leaf may be extracted, or the whole tie may be slipped sideways out through the open ends of the slots, leaving all of the pages loose and separable. In connection with this tie, embraced within it as the leaves are, and serving as a strut or counter-support for the stress when the tie is pulled tight, are stiff stubs 16, one at the front of all the sheets and one at the back of all the sheets, the sheets being embraced between these two. These are preferably formed of rather thick and stiff card-board as illustrated or of thin metal, and are punched with slots corresponding to the slots of the leaves in shape, size and location. These stiff stubs constitute what may be termed intermediary binders, for these, when tie 15 is constricted upon them, bind the leaves together between them and are themselves at the same time fastened to the covers, the leaves not being fastened to the covers except through the medium of these intermediary binders. For the fastening to the covers any suitable type of simple fastening may be employed, that illustrated being a ball and socket fastening 17 in which

the elements are fastened together by simple pressure and are separated by simple pulling apart. In the form illustrated in Figs. 1, 2 and 3, the ball element must have a shank 17' long enough to pass through the thickness of material comprising the back 12, in which a series of holes 12' are provided, through either one of which holes the ball may pass. This, as clearly seen in Fig. 3 and Fig. 1, allows any suitable amount of the extension 12 to be employed to form the back, according to the thickness of contents between the covers, and the remainder is concealed from view under the other cover. By the use of separate holes 12' the back is held properly adjusted as to its degree of fullness; and the back of the book is firm instead of being sleazy as when slashed by continuous slots therein. A modification of this feature of the invention is shown in Fig. 8 where the holes corresponding to 12' are marked 12'' and are large enough in size to receive the base plate 17' of the ball member of the ball and socket fastening. This does away with the need of having portions with specially long shanks and permits the use of the fastenings which are universally found in the market.

When the book is for use as an album or scrap-book, it is necessary to provide spaces between the leaves to allow for the matter which is to be mounted thereon. Hitherto it has been customary to inter-leave such books with stubs between each pair of adjacent leaves. This is an operation which, as compared with the improved method herein described, requires considerable time involving labor expense. As an improvement thereon, the drawings show the successive leaves arranged in groups 13'', which, in practice, may consist of six or eight or more leaves each, depending on the circumstances, the leaves in each group being contiguous to each other. Intervening between each two groups is a stub composed of a single thickness of card-board. This card-board combines in itself the total of thicknesses which would under the old system have been inserted separately between adjacent leaves by the interleaving process. The adjacent leaves in a group therefore have no interleaving, but the leaves being flexible, the pictures or other matter mounted upon them spreads them into the spaces provided on each side of the group, the leaves flexing as much as necessary. In the process of manufacture, it is a simple matter for the worker to divide the leaves into groups and insert the pieces 13' between them, the exact location of the pieces, or a uniformity of number of leaves in the groups not being important. These stubs, being of stiff material such as card-board, add to the stiff-

ness of the binder as a whole and prevent it from buckling when the tie or binder 15 is drawn tight.

In practice the sheets which are to constitute the book are arranged between the stubs which are to form the intermediary binders 16, with or without the spacing stubs 13', and are then bound together by passing the loop of a band 15 edgewise into the slots 14, drawing that tight, and then snapping the cover 10 in place, bending its extension 12 around the back so that the ball 17 projects through the proper hole and then snapping the other cover in place. To remove or insert a leaf, it is only necessary to rip off the cover and loosen the tie or band. When complete, the book presents a finished appearance, the fastenings being entirely concealed from view, except the ornamental leather covered buttons forming the backs of the socket members.

The form of tie shown is that which is preferred on account of strength and flatness, but a different form might be used, or a different kind of binding instead of a band employed; and variations may be made in other respects.

I claim as my invention:

1. A loose-leaf book comprising the combination of a multiplicity of sheets assembled together; stubs embracing the sheets and constituting intermediary binders; a band surrounding a part of the assembled sheets and stubs and binding them together; covers; and means to fasten the said binders detachably to the covers.

2. A loose-leaf book comprising, in combination, a pile of sheets unattached to each other; intermediary binders embracing them; means to hold said binders and the sheets together; covers; and detachable fastenings between the covers and said binders; one of the covers having an extension adapted to form a back for the book and to fold between the other cover and its adjacent binder; there being holes through said extension separate from each other through which to pass the fastenings of said other cover to its said adjacent binder.

3. A loose-leaf book comprising, in combination, a collection of sheets, stiff stubs embracing them, and a detachable tie binding all together, making all a unit; covers adapted to go on each side of said unit; and separable fastenings therefor arranged on the outer sides of the unit and the inner sides of the covers.

Signed by me at Boston, Mass., this 18th day of October, 1910.

FRANK E. HOUSH.

Witnesses:

EVERETT E. KENT,
JOSEPH T. BRENNAN.