

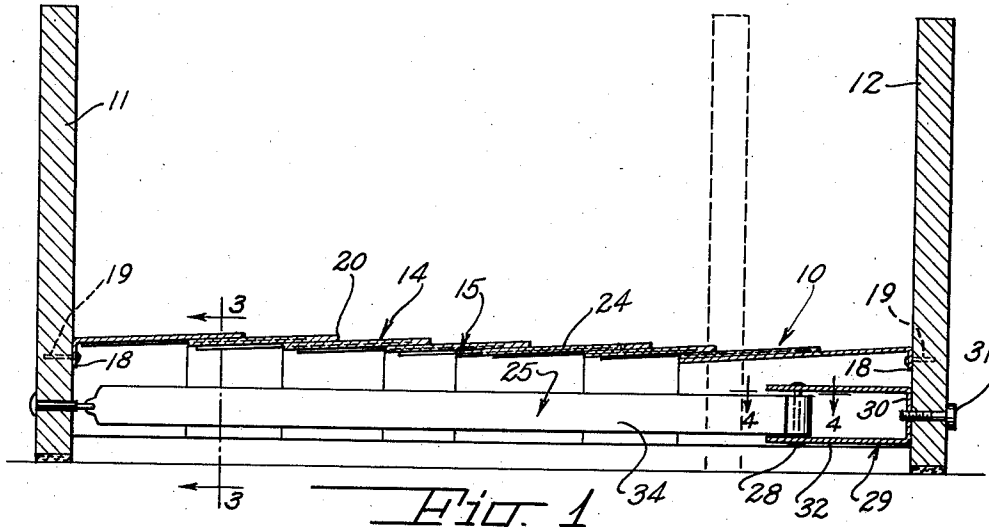
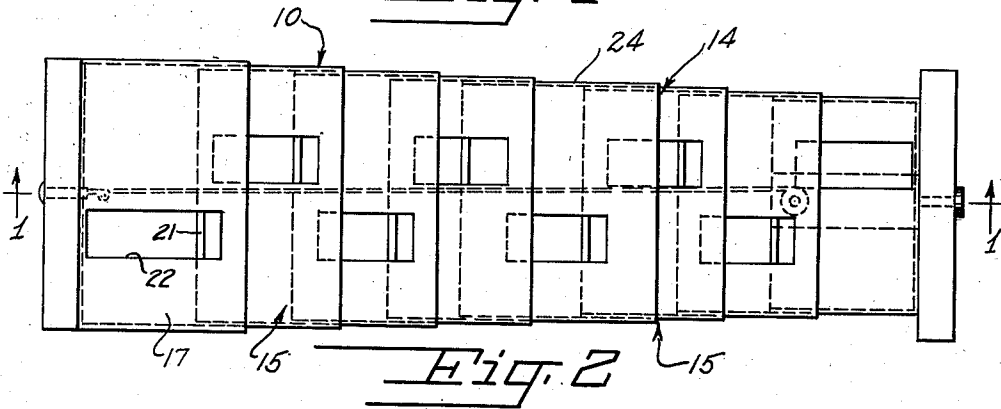
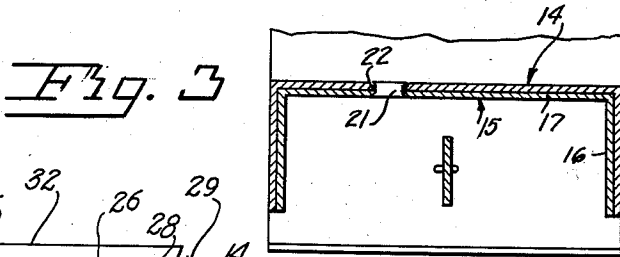
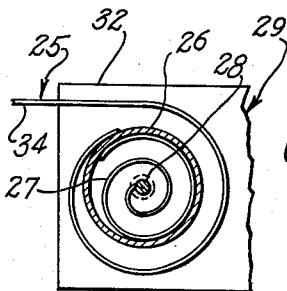
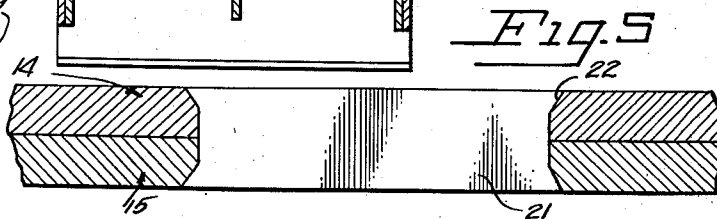
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BOOK END

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BOOK END

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1 Claim. (Cl. 211-43)

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This invention relates to book ends and more particularly to an improved book case or book holder having a pair of book ends connected together by a telescoping bottom so that the books supported therein may be supported compactly irrespective of the total number of books between the ends.

It is an object of this invention to provide a book case of the kind to be more particularly described hereinafter having a pair of spring pressed book ends for clamping books therebetween and maintaining the end books in bearing contact with the end members even when one or more books have been taken from the book case.

Another object of this invention is to provide a book case of this kind which is formed of a minimum number of parts which may be readily manufactured and assembled to provide a spring pressed book case of this kind which is highly efficient in operation.

A further object of this invention is to provide a book case of this kind which will properly support the books in a near vertical position so that the books will be preserved in their original shape by being supported erect even after one or several books have been removed.

With these and other objects in mind, which will become apparent from the drawings and description contained herein, this invention consists of the combination, construction and arrangement of parts as set forth in the description and appended claim.

In the drawings:

Figure 1 is a longitudinal section of a book case constructed according to an embodiment of this invention taken on the line 1-1 of Figure 2.

Figure 2 is a top plan view.

Figure 3 is a transverse section, partly broken away, taken on the line 3-3 of Figure 1.

Figure 4 is a fragmentary detailed transverse section taken on the line 4-4 of Figure 1.

Figure 5 is an enlarged, fragmentary detail section of the connecting pin and slot of an adjacent, telescoping member.

Referring to the drawings, the numeral 10 designates generally a compact book end or book case which is so constructed and arranged that books contained between the ends thereof will be properly supported in a vertical upended position and other books may be added to or removed from between the ends and the remaining number will be properly supported.

The book case 10 is formed of a pair of opposed end members 11 and 12 connected together by a

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spring pressed telescopic bottom 14. The end members 11 and 12 are formed of flat vertically extending members which are adapted to abuttingly engage the outer cover of the outer books contained therebetween, in the manner of conventional types of book ends.

The bottom 14 which is connected between the end members 11 and 12 is formed of a plurality of telescoping members or plates 15. Each of the telescoping members 15 is formed of a flat strip of metal, plastic or other suitable material bent into an inverted U-shape. The side arms 16 of the plate 15 depend from the side edges of the bight 17 to form downwardly extending flanges. The flanges 16 provide for the longitudinal re-inforcement of the members 15 individually and of the bottom 14 as a whole. The upper side of the bight 17 forms the bottom of the book case 10 on which the books are to be supported.

The horizontal end members or plates 15 are fixedly secured to the end vertical members 11 and 12 by downwardly bent lugs or flanges 18 through which bolts or nails 19 are extended and into the members 11 and 12. Each of the plates 15 overlaps the adjacent plate on one transverse end thereof. The upper plate of the overlapped members 15 is bevelled along the overlapping edge, as at 20, to provide a substantially smooth continuous surface on the upper surface of the bottom 14. The width of each of the plates 15 is progressively less than the width of an adjacent plate so that they may be telescoped together when there are not enough books between the ends 11 and 12 to hold the ends at their extreme open position.

For connecting the intermediate plates 15 in sliding relation to each other and to the end members 11 and 12, a connecting member or pin 21 is fixedly secured to one end of each adjacent plate 15 and is slidably engaged with an adjacent plate 15. The connector 21 engages slidably in a longitudinal slot 22 of the adjacent plate for supporting the adjacent plates slidably together. The edges of the slots 22 are bevelled along their upper edges and the upper outer edges of the connecting pin are flared to engage the bevelled edges to provide a substantially flush surface over the connecting member 21 and bottom 14.

As the plates 15 are only slightly overlapped in their freely extended position, the extended bottom 14 will have the least support in this position. In order to re-inforce the bottom 14 one of the nearly center members, as indicated at 24,

is overlapped a greater distance over and under both of its adjacent plates 15.

The book case 10 is biased to its closed position by a resilient spring member 25 connected between the end members 11 and 12. The member 25 is formed of a cylindrical or tubular ring 26 about a coiled spring 27. The inner end of the spring 27 is fixed to a center bolt 28 and the outer end fixed to the inner wall of the ring 26. A U-shaped supporting bracket 29 is fixed to one end member, as 12, for securing the spring member 25 thereto. The bight 30 of the bracket 29 is fixed to the member 12 by a bolt 31 or other suitable attaching means, and the inwardly extending arms 32 are adapted to enclose the ring 26 therebetween. The bolt 28 is fixed between the arms 32 so that the ring 26 may be rotated thereabout. An elongated flexible member, as a strap, 34 is fixed at one end to the outer surface of the ring 26 and at its other end to the opposite end member 11. The coil spring 27, ring 26, and strap 34 are so related that in the normal position of the member 25 the strap 34 is adapted to be wound about the ring 26 and as the strap 34 is extended the tension of the spring 27 is increased so that the ends 11 and 12 are biased together convergently and the bottom 14 is telescoped with the plates 15 in their extreme inner overlapped position.

In the use and operation of this book end, the end members 11 and 12 are biased together by the spring member 25 to a closed position limited by the length of the closed telescoped plates 15 or by the outer edges of a number of books contained between the end members 11 and 12, whichever is the greatest.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim

all variations falling within the purview of the appended claim.

What I claim is:

A spring pressed telescoping book rack comprising a pair of vertical end members, confronting, transverse, inverted U-shaped bottom forming members on each of said end members, a plurality of intermediate, inverted U-shaped bottom forming members between said first named bottom forming members, each of said members formed with a longitudinally extending slot in the bight portion thereof, a connecting member carried by each of said bottom forming members slidably engaged in the slot of an adjacent member, each of said intermediate members being slidably engageable within the adjacent member and spring means connected between said end members biasing said end members together and said rack to a closed telescopic position.

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