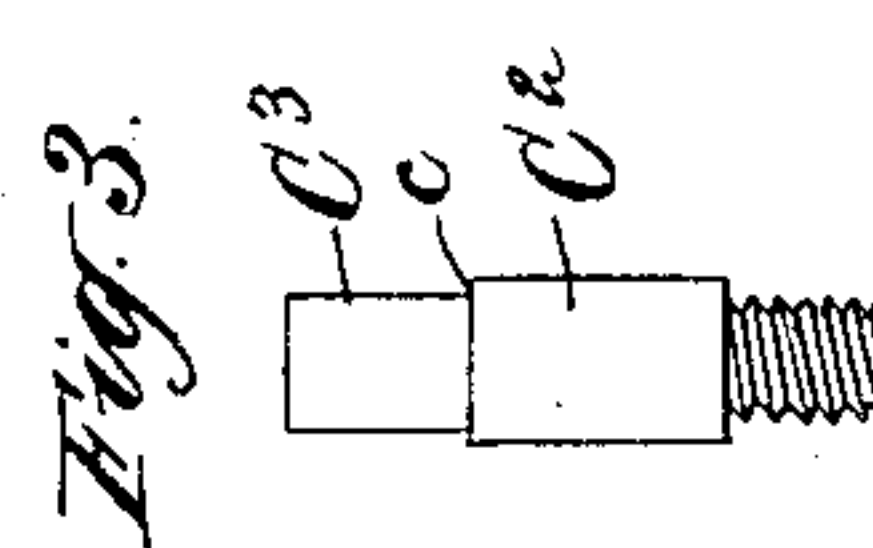
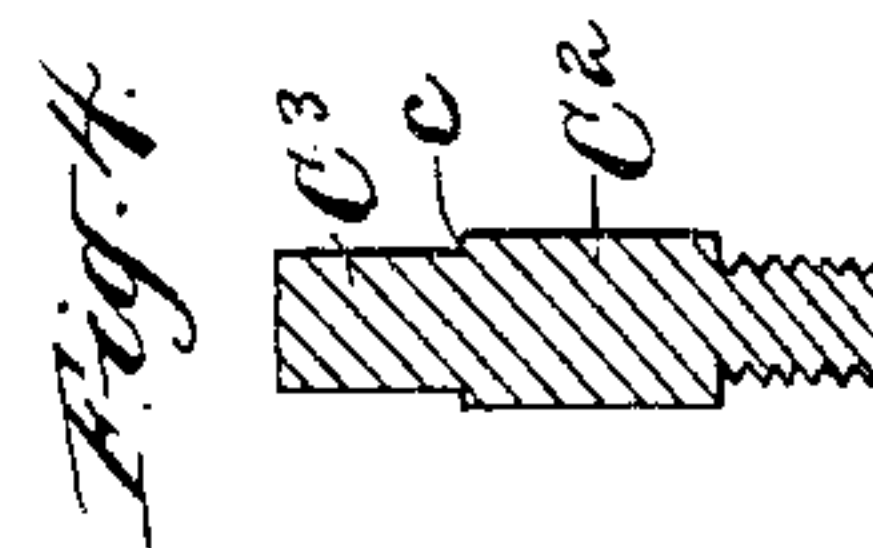
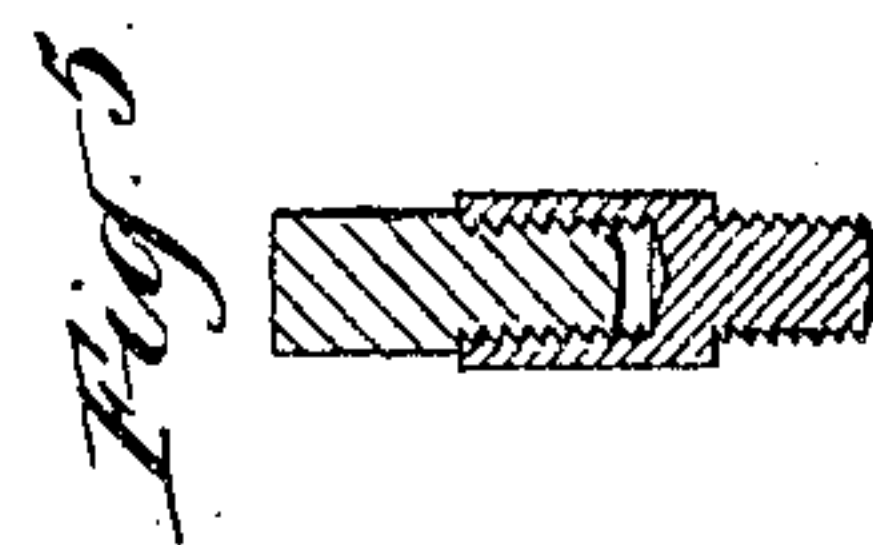
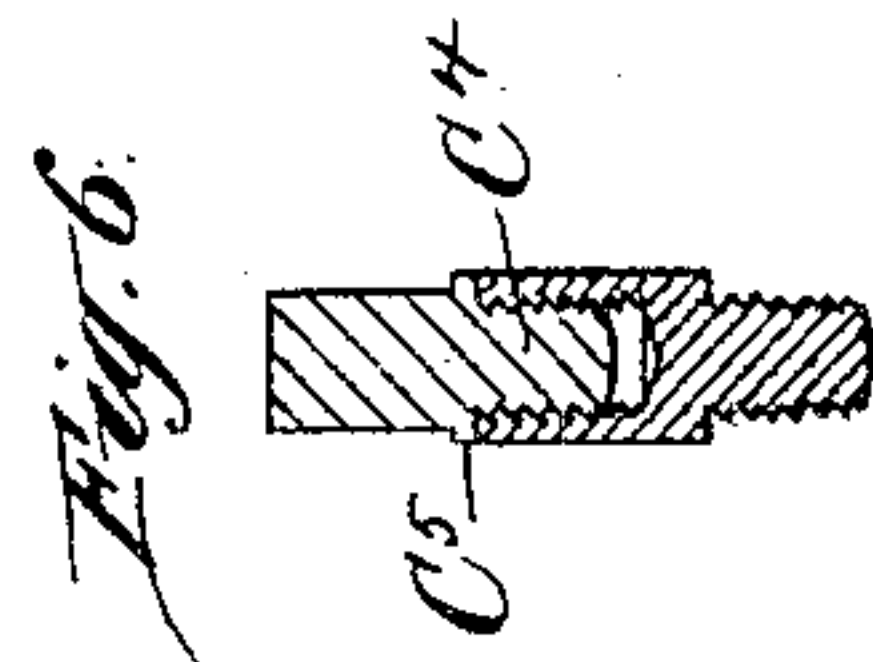
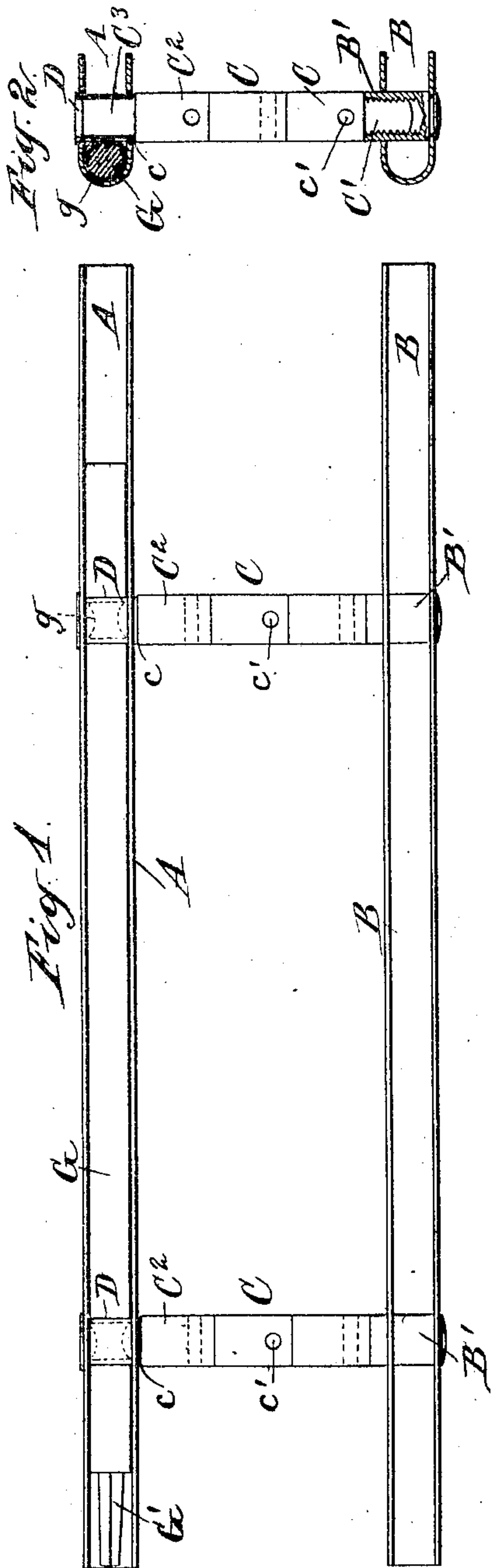


No. 852,139.

PATENTED APR. 30, 1907.

P. REVERE.
LOOSE LEAF BINDER.
APPLICATION FILED NOV. 16, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BINDER.

No. 852,139.

Specification of Letters Patent.

Patented April 30, 1907.

Application filed November 16, 1906. Serial No. 343,675.

To all whom it may concern:

Be it known that I, PAUL REVERE, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Loose-Leaf Binders, of which the following is a specification.

The invention relates to the impaling-posts and the bars connected thereto, and the object of the invention is to provide a binder in which these parts are simple and inexpensive to manufacture and in which the posts may be lengthened or shortened as required in conditioning the binder to receive a greater or less number of leaves.

The invention consists in certain novel features and details of construction by which the above objects are attained, to be hereinafter described.

The accompanying drawings form a part of this specification and show the invention as it has been carried out in practice.

Figure 1 is a face view or front elevation of the metal parts of a binder made in accordance with the invention. Fig. 2 is a corresponding vertical section partly in elevation. Fig. 3 is an elevation of the upper part of one of the posts. Fig. 4 is a vertical section of the same. Figs. 5 and 6 are vertical sections showing modifications of the same part.

Similar letters of reference indicate like parts in all the figures.

The invention is in that class in which the leaves are held on sectional posts joined at the ends to bars, one of which is removable. A and B are the top and bottom bars respectively, each preferably of sheet metal folded to U-shape in cross-section, and joined each to the other by the posts C, two posts are shown in the drawing but it will be understood that there may be as many as required, determined by the length of the bars A B and by the size and weight of the leaves.

In the lower bar B are two hollow sockets B¹ B¹, each riveted to the lower plate of the bar and screw threaded interiorly to receive a corresponding screw threaded nipple C¹ on a post section C. The latter is also hollow and drilled and tapped to receive a similar section. Each post may be thus built up to provide the desired space between the bars to accommodate the leaves and may be increased or diminished as required.

D D are thimbles of sheet-metal extending loosely through the upper bar and engaged therein by slight flanges on their upper and lower edges. Each thimble is cut longitudinally to permit reduction in diameter by external pressure, such pressure being produced by turning a rod G lying in the fold or bight of the upper bar and held by the engagement of grooves g with the thimbles. The grooves g are so shaped that the axial turning of the rod by the application of a key or similar socketed instrument to its squared end G' will alternately press upon and release the thimbles.

The uppermost post-section C² differs from the others in that it is provided with a solid extension C³ received in the corresponding thimble D and firmly held therein by the rod G as above described. This extension may be integral with the upper post-section as shown in Figs. 3 and 4, or may be a separate plug screwed into such section as in Figs. 5 and 6. In either form an annular shoulder or offset c is provided to serve as a seat for the upper bar, which shoulder may be the upper face of the post-section C², or a flange C⁵ on a plug C⁴ as in Fig. 6.

All the post sections except the uppermost C² are cylindrical and interiorly and exteriorly threaded to be interchangeable. The upper section may be screwed directly into the socket B¹ to provide for a lesser number of leaves, or as many intermediate sections C may be added as found necessary. In either condition a firm smoothly cylindrical post is afforded. Each section is preferably perforated transversely as at c¹ to receive a pin or other instrument to aid in joining and separating the sections.

It will be noted that the construction shown permits the upper face of the upper bar and lower face of the lower bar to be practically plane, the only projections being the flat rivet heads on the sockets B¹ and the slight flanges on the thimbles D. It will be also noticed that the top section and the thimble are so relatively proportioned and constructed that said top sections can never be protruded through the thimble and hence never projects beyond the upper face of the top-bar. This is important in producing an attractive ledger or like book with smooth exterior surfaces.

The solidity of the extensions C³ is impor-

tant in successfully resisting the crushing strains of the locking-rod G and thus avoiding distortion.

The threaded nipples on all the post sections are similar so that the posts may be built up without special selection or location of parts, and the screw engagement of the nipples with adjacent sections insures great strength, rigidity and alinement.

The number of posts may be increased as found necessary or desirable.

I claim:—

1. In a loose leaf binder, a bottom bar, screw-threaded sockets therein, a top bar, tubular thimbles therein, locking means in said top bar constructed to compress said thimbles, and posts composed of interchangeable sections constructed to be screwed into said sockets and each other, and a top section for each post having a shoulder, and an extension matching to and received in one of said thimbles and terminating within said thimbles.

2. In a loose leaf binder, a bottom bar of U-section, screw-threaded sockets extending through said bottom bar and riveted in the lower plate thereof, a top bar of U-section, tubular thimbles extending loosely through said top bar and held therein by flanges on

said thimbles, a locking-rod rotatably mounted in the fold of said top bar and constructed to compress said thimbles, posts composed of interchangeable cylindrical sections screwed axially into said sockets and each other, and a top section for each post, a shoulder on said top section, and a solid cylindrical extension thereon matching to and received in one of said thimbles.

3. A loose-leaf binder, comprising a bottom-bar, screw-threaded sockets therein, a top-bar, compressible tubular thimbles therein, locking means within the top-bar to compress said thimbles, posts comprising sections screwed into said sockets and each other, and a top-section for each post having a portion received in one of said thimbles, said top-section having means to limit its entrance into its thimble to prevent the upper end of said top-section at all times from protruding therethrough.

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses.

PAUL REVERE.

Witnesses:

CHAS. A. HAUCK,
CHARLES R. SEARLE