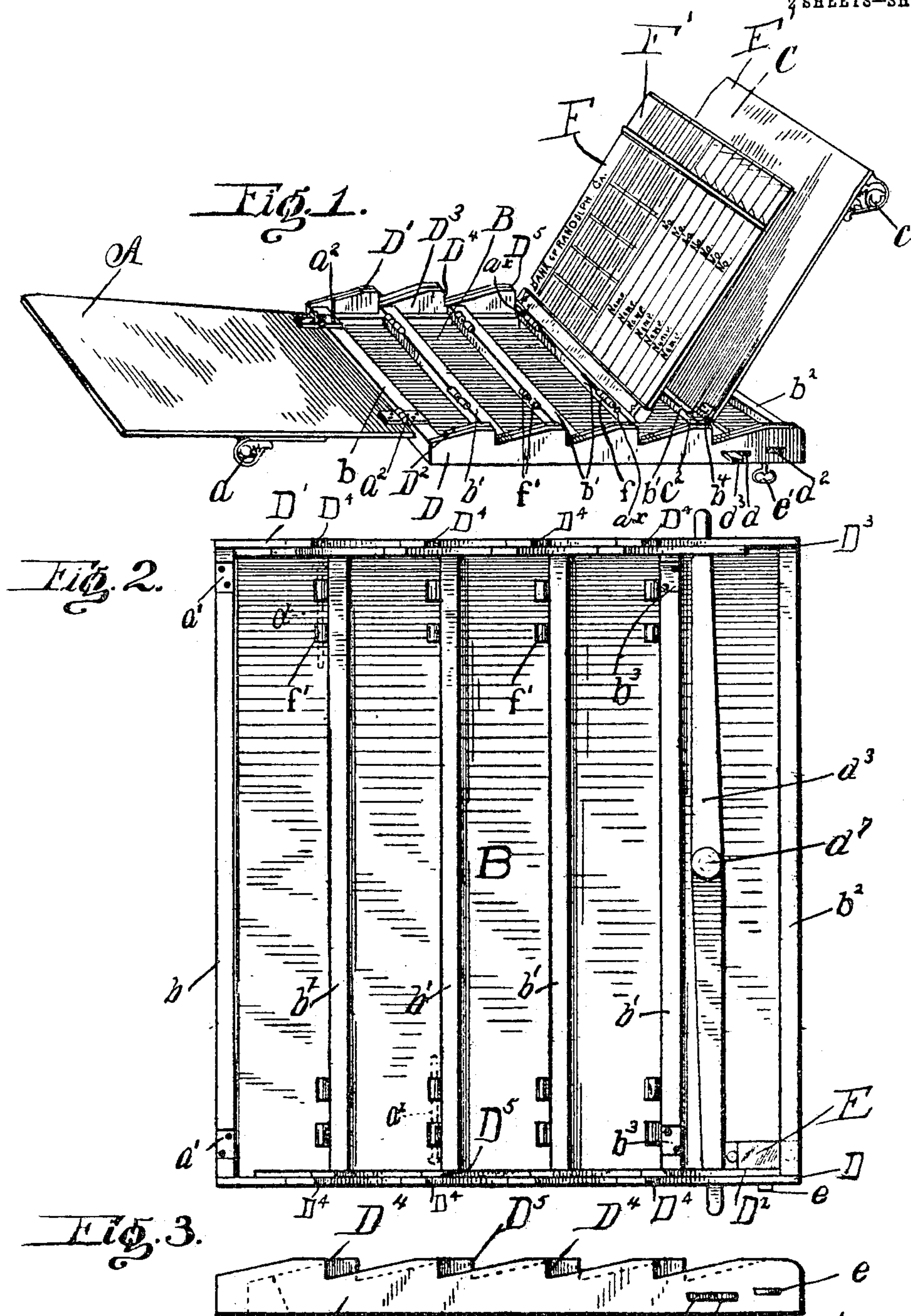


No. 798,961.

PATENTED SEPT. 5, 1905.

A. J. HANSELL.
BOOK BINDING AND LOCKING DEVICE.
APPLICATION FILED DEC. 19, 1903.

2 SHEETS—SHEET 1.



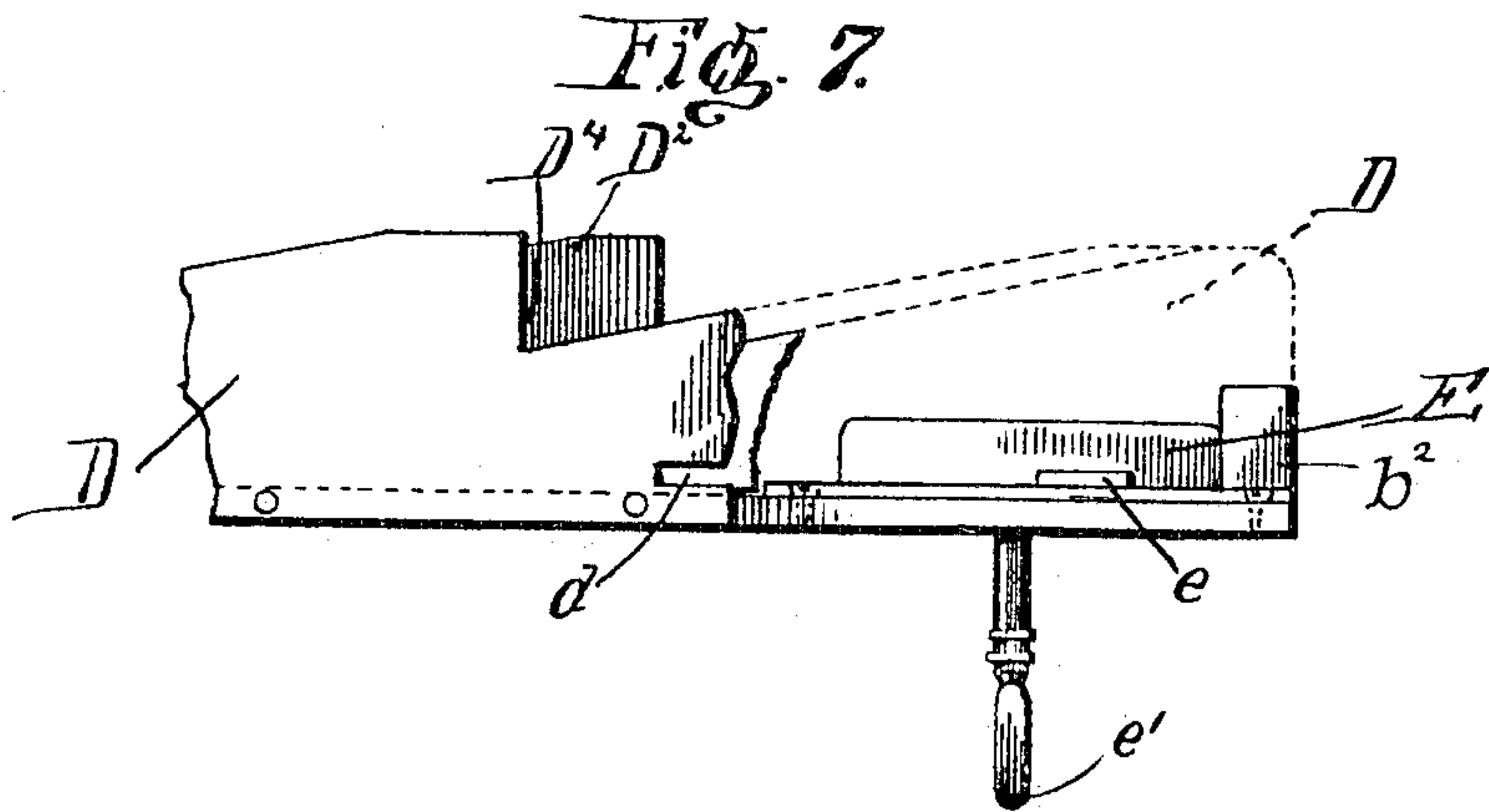
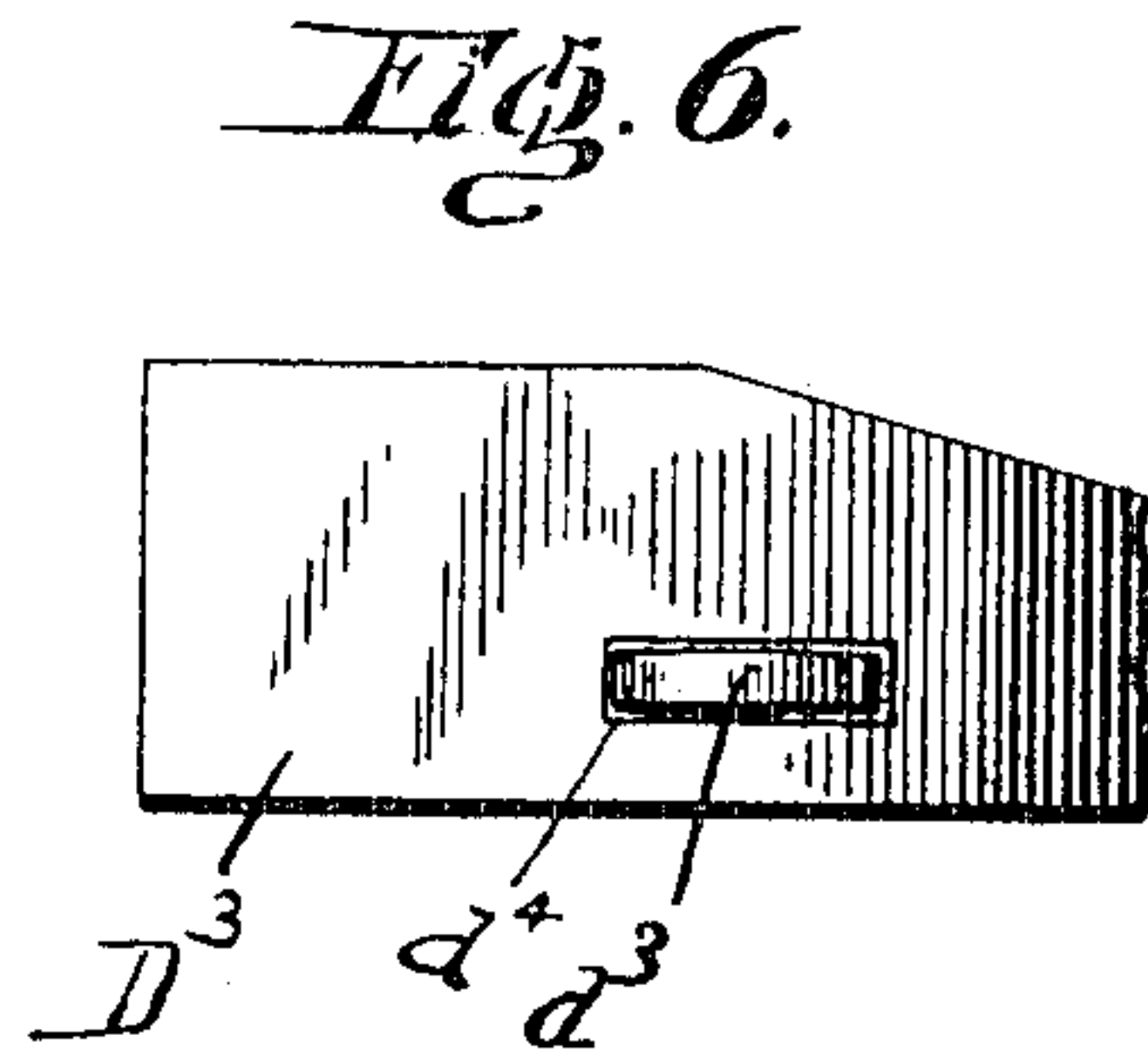
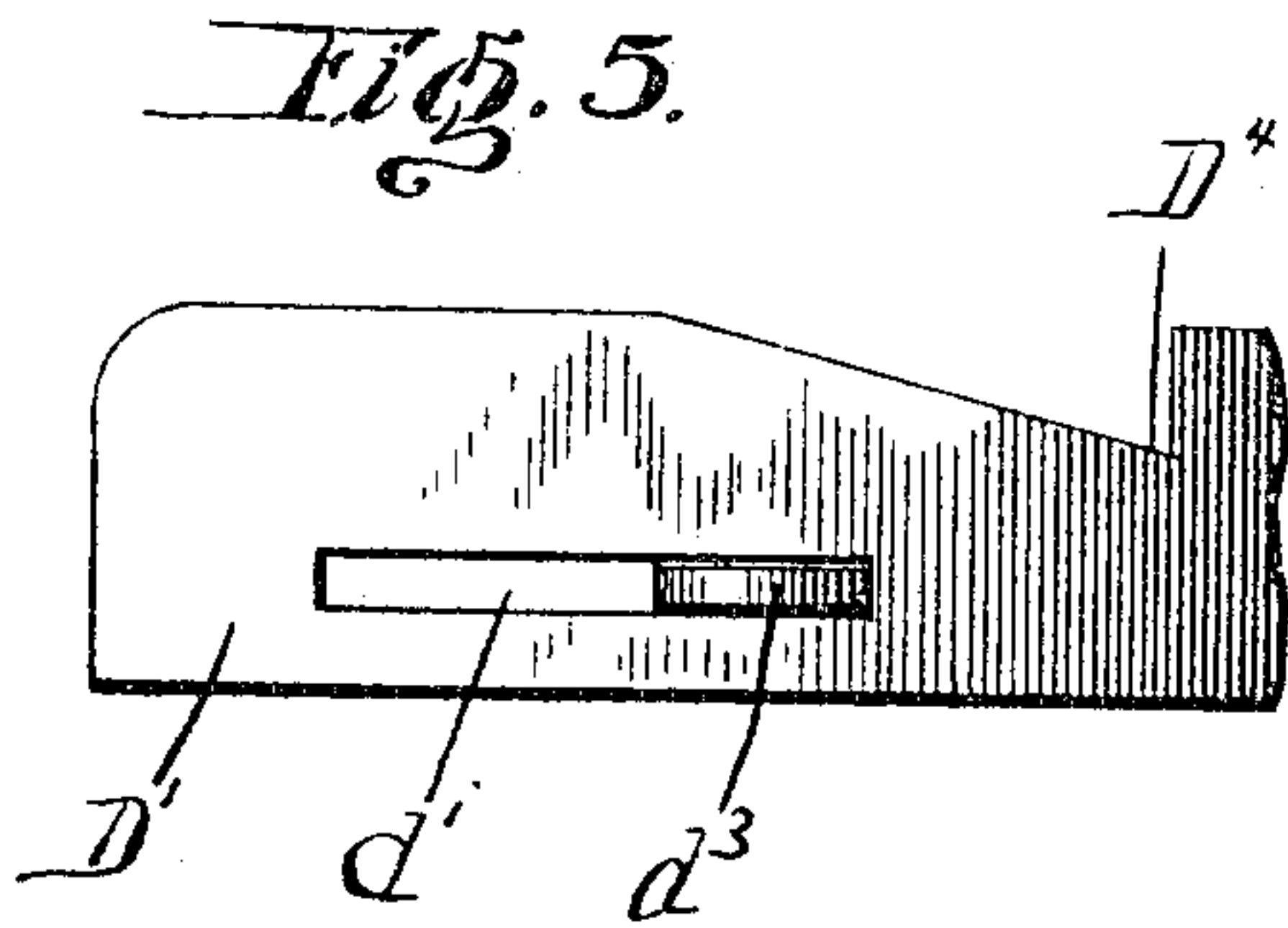
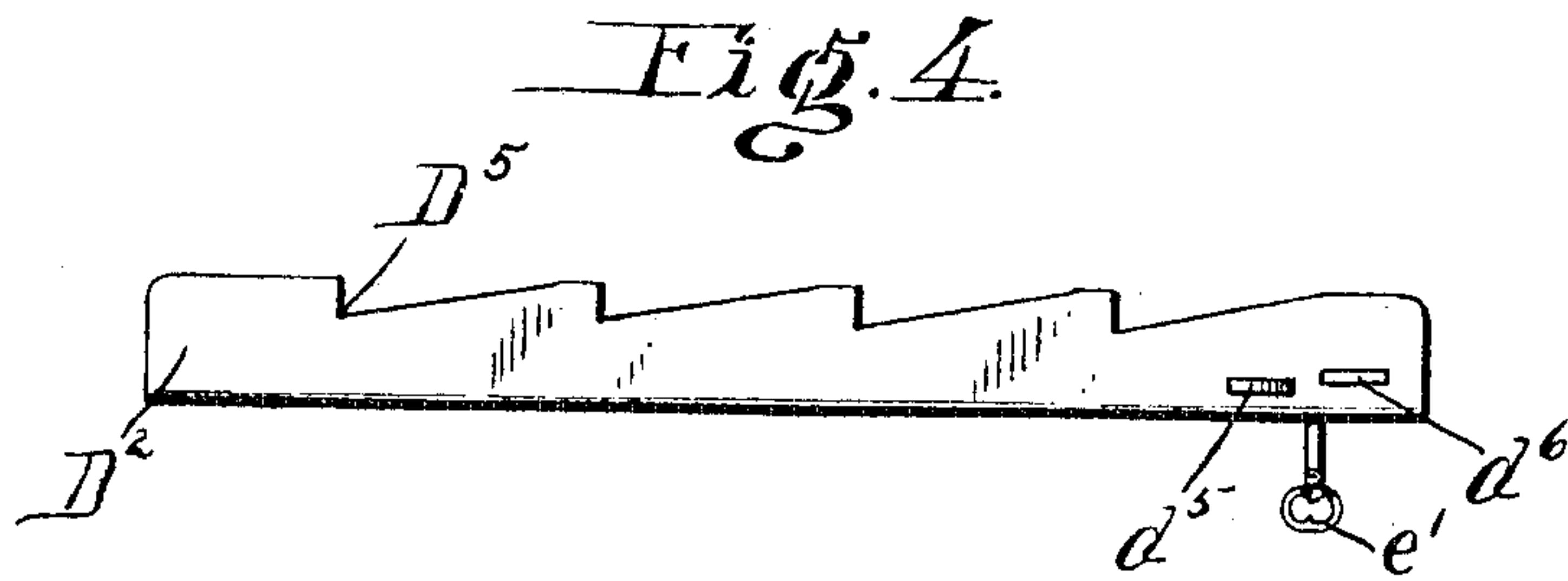
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BOOK BINDING AND LOCKING DEVICE.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ANDREW J. HANSELL, OF CUTHBERT, GEORGIA.

BOOKBINDING AND LOCKING DEVICE.

No. 798,961.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed December 19, 1903. Serial No. 185,819.

To all whom it may concern:

Be it known that I, ANDREW J. HANSELL, a citizen of the United States, residing at Cuthbert, in the county of Randolph and State of Georgia, have invented certain new and useful Improvements in Bookbinding and Locking Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to produce a binder for records of the "loose-leaf" type which will provide means for locking the leaf-sections against unauthorized removal.

A further object is to so form the binder and leaf-sections that when the binder is open the leaf-sections will be firmly supported and present a suitable surface for writing.

To these ends the invention may be said to consist in the constructions and combinations of parts hereinafter described and claimed, and in its preferred form it comprises a binder of general book form consisting of a back, covers, and between the covers removable pivoted leaf-sections each having a connection with the back, in connection with locking mechanism for preventing or permitting the removal of the leaf-sections, including a removable connecting element in each leaf connection, a retaining member movable transversely of the paths of all of such elements for preventing or permitting the removal thereof, as desired, and a lock for the retaining member. In such preferred form of my invention the back is made flat and the leaf-sections hinged thereto in what is substantially a horizontal plane, so that the binder when open will not stand far above the surface of a desk or other support, and means are provided for holding one of the outer sections when opened at a slight angle to the plane of the support, so that the remaining sections when swung toward the open section may be parallel upon it instead of catching against its pivotal edge and extending yieldingly above its surface, as would be the case were the lowest leaf-section permitted to lie flat upon the desk. The leaf-sections are equally spaced across the back, so that the ends will overlap when the binder is spread apart, and in order to facilitate writing upon these exposed ends when the leaves are supported at an angle for the purpose specified the outer portions of the sections are bent downward at such angle that when the binder

is open and the leaves all supported on the lowest section the plane formed by the exposed ends will be practically parallel to the pivotal plane.

All the constructions just indicated and others will be fully described in the following specification and illustrated in the drawings, in which—

Figure 1 is a perspective view of the binder, partly open, showing the retaining devices for the leaf-sections in their unlocked positions. Fig. 2 is a plan view of the back with the covers and leaf-sections removed, the retaining devices being illustrated as in their locked positions. Fig. 3 is an elevation of the bottom of the back with the retaining devices in their locked positions. Fig. 4 is an elevation of the outer face of the lower retaining member, the key of the lock being also shown in this view. Fig. 5 is a view corresponding to Fig. 3, being an elevation of the top of the back, the major part being broken away, leaving only the portion through which the operating-lever projects. Fig. 6 is a view corresponding to Fig. 4, being an elevation of the outer face of the upper retaining member, the major portion being broken away, leaving only the portion immediately in rear of the fragment shown in Fig. 5. Fig. 7 is an enlarged view of the right end of Fig. 3 with part of the end of the back and retaining member indicated in dotted lines to show the lock behind.

In the drawings, B indicates a flat back having a supporting plane, though not necessarily a continuous one, formed on its under portion and adapted to rest upon a desk or other suitable support; A, a rear cover connected, as at a' , by hinges a'' to a ridge or low wall b , extending down the left side of the back, and C a front cover secured at some distance from the opposite side, as at b^3 , by hinges b^4 to the most remote of a series of equally-spaced and equally-high ridges b' , which are parallel to each other and to ridge b . Another ridge or low wall b^2 , parallel to the others, extends down the right side of the back, all of these ridges serving to strengthen the back, as well as providing convenient projections to which the leaf-sections F may be hinged in a plane substantially parallel to the supporting plane in a manner more particularly described hereinafter. These leaf-sections are intended to receive records, particularly records in connection with depositors' accounts in banks. The specific construction

of the leaf-section whereby this object is attained is made the subject-matter of my copending application filed December 19, 1903. In connection with the present case they may
 5 be considered merely as separate leaf members, preferably so constructed with reference to the binder that they may be written upon while in the binder.

In opening the binder rear cover A is swung
 10 down to the left and the leaf-sections and front cover C are swung downward to the right, means being provided for supporting the front cover C at a slight angle above the supporting plane. It may be noted here that
 15 hinged member C is a cover only for convenience and that in the present connection it may be considered as merely one of the leaf-sections, being pivoted in the same plane with them. Such supporting means is illustrated in Fig. 1 as embodied in a foot c , secured to the lower surface of hinged section C at its outer end and projecting sufficiently below it to contact with the supporting desk or table when section C is still at such angle
 20 above the plane of the support that the remaining leaf-sections will be parallel upon it. When so supported, each leaf-section rests unyieldingly with its outer end upon the section immediately beneath on the portion thereof of remote from its pivotal axis. As clearly explained in my copending application based on the individual leaf-sections filed December 19, 1903, Serial No. 185,820, the greater portion of the writing upon a section is done
 30 on the outer end thereof, and for rendering easy the entering of records upon such portions of the leaves the ridges b' are equally spaced from each other, so as to cause the leaves to overlap when opened. Further,
 40 the outer exposed ends of the sections are bent downward, as at F' , to such a degree that when the outer edge of each section rests upon the section immediately below with the lowermost leaf raised slightly, as specified,
 45 the plane of the bent outer ends of the leaves will be substantially parallel to the support and the horizontal pivoting plane. A second supporting-foot a is formed upon the lower face of rear cover A, so as to take the strain
 50 off the hinges thereof.

The arrangements whereby the leaf-sections are rendered removable or locked to the back, as desired, will now be considered.

Near the top and bottom of the inner edge
 55 of each leaf-section is a hinge-leaf or similar hinge member f , and the other leaf or corresponding hinge member f' is located at the proper point on the adjacent ridge b' . For connecting the two sets of hinge-leaves at the top and bottom of the ridges and leaf-sections there are provided axially-removable pivot-pins a^x , one for each complete hinge. By reason of their enlarged inwardly-disposed heads the pins are removable outwardly
 65 only. The hinge-leaves f and f' and pivot-

pins a^x , together with any suitable means (not shown) for securing the hinge-leaves to the sections F and the ridges b' , constitute, broadly, separable connections between the leaf-sections and the back, each connection
 70 being constructed to permit pivoting of the leaf and including a releasable connecting element. For preventing or permitting the release of the pivot-pin there is provided a lock-controlled retaining member movable trans-
 75 versely of the path of such releasable or removable part, and by the phrase "transversely of the path" I wish to be understood as meaning that the retaining member is not only movable transversely of the direction of
 80 removal of the pin, but actually intercepts the removable part before disconnection of the separable fastening is effected.

Since the paths taken by the removable parts are parallel and in substantially the same
 85 plane, each series of connections at top and bottom of the binder may be controlled by a single retaining member in the form of a slide, D^2 indicating the slide for the lower series of connections, and D^3 the corresponding slide
 90 for the upper series. Each slide is of such height as to obstruct simultaneously the paths of all the pivot-pins a^x in its series and is provided with cut-away regions D^5 , which may be in the form of serrations and can be posi-
 95 tioned simultaneously, so as to permit the removal therethrough of all the adjacent pins a^x . In order that the slides may be shifted into the locking or unlocking positions indicated, they are allowed to reciprocate at top and bot-
 100 tom of the back in channels between stationary top and bottom walls D' and D , respectively, and the ends of ridges b b' b^2 . These end walls D and D' serve to protect the slides and are formed similarly thereto with cut-away
 105 regions D^4 , which permit the free passage outward of the pivot-pins a^x .

The two retaining-slides D^2 and D^3 are operated so as simultaneously to present their solid or cut-away portions in the paths of the
 110 pivot-pins a^x by an actuating-lever d^3 , pivoted intermediate its ends, as at d^7 , between the front cover C and right side wall b^2 . The ends of lever d^3 pass through openings d^4 and d^5 , properly located in the upper and lower slides
 115 D^3 and D^2 , respectively, so that by turning the lever one way both slides may occupy their locked positions and upon rotation of the lever in the reverse direction both slides will be in the unlocked positions. The ends
 120 of lever d^3 pass through slots d' and d in the top and bottom walls D' and D , respectively, either end serving as a handle. Lever d^3 serves also to connect the two slides D^2 and D^3 to form practically one retaining device, so
 125 that a suitable lock acting upon any part of the device may secure both slides in their locked positions, and thus prevent surreptitious removal of the leaf-sections F for purposes of tampering with the records thereon.
 130

Such means is indicated at E as a key-operated lock securely fastened to the upper face of the back in the chamber occupied by lever d^3 and bounded by top and bottom walls D' and D and side wall b^2 and ridge b' . The bolt e of the lock is arranged to be projected outwardly when the slides are in their locked positions through aperture d^6 in lower slide D² and registering opening d^2 in bottom wall D. While the lock may be of any desired form, I prefer that it be of the key-operated type in which the key may be removed only when the bolt is projected, such key being indicated at e' .

In the use of the binder when it is desired to make entries therein the back is placed flat upon a suitable support, rear cover A swung down to the left and front cover C to the right until it is maintained at the angle provided for by foot c . As many leaf-sections F as are desired are now turned over upon the front cover, all lying firm and parallel, as already described, with the outer ends in a substantially horizontal plane. When an authorized person desires to take out one of the leaf-sections, key e' is inserted in the lock, the bolt e retracted, and operating-lever d^3 swung so that the cut-away portions of slides D² and D³ register with the cut-away portions of end walls D and D'. The pivot-pins a^x of the desired section or sections may now be shifted outwardly and the corresponding leaf-sections lifted from the back.

The utility and practicability of this invention will be apparent, and as I conceive myself to have discovered, broadly, the arrangements embodied therein I do not wish to be limited to the specific constructions illustrated, but reserve to myself the full breadth and scope of the following claims.

What is claimed as new is—

1. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge thereto, and a releasable connecting element between such edge and the back; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof.

2. In a device of the character described, the combination with a back, a removable leaf-section thereon, and a separable connection between one edge of the section and the back constructed to permit pivoting of the section on said connection and including a releasable connecting element; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof.

3. In a device of the character described, the combination with a back, a removable leaf-section thereon, and a separable connection be-

tween the section and the back constructed to permit pivoting of the leaf-section on said connection and including a releasable connecting element; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable transversely of the path of release of such connecting element and constructed to bar all release thereof.

4. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge to the back, and a releasable connecting element between such edge and the back; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member mounted on the back and movable into the path of release of such connecting element, being constructed to bar all release thereof.

5. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge thereto, and a releasable connecting element between such edge and the back; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining-slide arranged to be reciprocated on the back transversely of the path of release of such connecting element and having a solid portion constructed to bar all release of said element and a cut-away portion formed to permit such release.

6. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge thereto, and a releasable connecting element between such edge and the back; of means for preventing the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof, and a lock for the retaining member.

7. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge to the back, and a releasable connecting element between such edge and the back; of means for preventing the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof, and a key-operated lock for the retaining member.

8. In a device of the character described, the combination with a back, a removable leaf-section pivoted at one edge thereto, and a releasable connecting element between such edge and the back; of means for preventing the removal of the leaf-section, comprising a retaining member mounted on the back and movable into the path of release of such connecting element, being constructed to bar all release thereof, and a lock for the retaining member also mounted on the back.

9. In a device of the character described, the combination with a back, a removable leaf-section thereon, and a separable connection

between such section and the back constructed to permit the pivoting of the leaf-section on said connection and including a connecting element releasable in a path parallel to the pivotal axis; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof.

10. In a device of the character described, the combination with a back, a removable leaf-section thereon, and a separable connection between such section and the back constructed to permit pivoting of the leaf-section on said connection and including a releasable connecting element comprising an axially-movable pivot-pin; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of release of such connecting element and constructed to bar all release thereof.

11. In a device of the character described the combination with a back, a removable leaf-section thereon, and a separable connection between such section and the back constructed to permit the pivoting of the leaf-section on said connection and including a removable connecting element comprising an axially-movable pivot-pin removable in one direction only; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of such connecting element and constructed to bar all removal thereof.

12. In a device of the character described, the combination with a back, a removable leaf-section thereon, and a separable connection between such section and the back, comprising a hinge-leaf secured to the leaf-section, a complementary hinge-leaf secured to the back, and an axially-releasable pivot-pin connecting said leaves; of means adapted to be positioned to prevent the removal of the leaf-section, comprising a retaining member movable into the path of release of the pivot-pin and constructed to bar all release thereof.

13. In a device of the character described, the combination with a back, a plurality of removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and releasable connecting elements between such edges and the back; of means adapted to be positioned to prevent the removal of the leaf-sections, comprising a retaining member movable into the paths of release of all the connecting elements and constructed to bar simultaneously all release thereof.

14. In a device of the character described, the combination with a back, a plurality of removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and releasable connecting elements between such edges and the back; of means adapted to be

positioned to prevent the removal of the leaf-sections, comprising a retaining-slide mounted to be reciprocated on the back transversely of the paths of release of all the connecting elements and having solid portions constructed and arranged simultaneously to bar all release of all said elements and cut-away portions formed to permit the release of said elements.

15. In a device of the character described, the combination with a back, a plurality of removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and releasable connecting elements between such edges and the back; of means adapted to be positioned to prevent the removal of the leaf-sections, comprising a retaining-slide mounted to be reciprocated on the back transversely of the paths of release of all the connecting elements and having solid portions constructed and arranged simultaneously to bar all release of all said elements and cut-away portions formed and positioned simultaneously to permit the release of all the connecting elements.

16. In a device of the character described, the combination with a back, means thereon for permitting the attachment thereto of a leaf member, and a releasable connecting element carried by such means; of a movable retaining member mounted on the back and constructed to bar all release of said element.

17. In a device of the character described, the combination with a back, means thereon for permitting the parallel attachment thereto of a plurality of leaf-sections, and connecting elements carried by the back and releasable in parallel paths; of a stationary wall secured to the back transversely of such paths and containing cut-away regions formed to permit the release of such connecting elements, and a retaining-slide mounted for reciprocatory movement on the back between the wall and the connecting elements and containing cut-away regions formed and arranged substantially to coincide with the cut-away regions in the wall.

18. In a device of the character described, the combination with a back, a plurality of parallel ridges secured to the back, and elements constructed to connect a plurality of leaf-sections to the back longitudinally of the ridges, such elements being mounted on the ridges and releasable longitudinally thereof; of a stationary wall secured to the back transversely of the ridges and containing cut-away regions formed to permit the release of such connecting elements, and a retaining-slide mounted for reciprocatory movement on the back between said wall and the ends of the ridges and containing cut-away regions formed substantially to coincide with the cut-away regions in the wall.

19. In a device of the character described, the combination with a back, a plurality of

removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and a pair of releasable connecting elements between each pivotal edge and the back, the corresponding members of such pairs forming two series of connecting elements at opposite sides of the back; of means adapted to be positioned to prevent the removal of the leaf-sections, comprising a retaining member mounted on the back adjacent each series of said elements and constructed to bar all release thereof, and means uniting and arranged simultaneously to move both retaining members into the paths of release of said elements.

20. In a device of the character described, the combination with a back, a plurality of removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and two series of connecting elements at opposite sides of the back comprising corresponding members of pairs of such elements between the several leaf-sections and the back, the members of each of such series being releasable in the same direction in paths parallel to the pivotal axes; of means adapted to be positioned to prevent the removal of the leaf-sections, comprising a retaining member mounted on the back adjacent each series of connecting elements and transverse of the pivotal axes of the leaf-sections and constructed to bar all release of the adjacent connecting elements, and means uniting and arranged simultaneously to move both said retaining members into the paths of release of such connecting elements.

21. In a device of the character described, the combination with a back, a plurality of removable leaf-sections pivoted at one edge thereto with their pivotal axes parallel, and a pair of releasable connecting elements between each pivotal edge and the back, the corresponding members of such pairs forming two series of connecting elements at opposite sides of the back; of means for preventing the removal of the leaf-sections, comprising a retaining member mounted on the back adjacent each series of said elements and constructed to bar all release thereof, means uniting and arranged simultaneously to move both retaining members into the paths of release of said elements, and a lock operable simultaneously to secure both retaining mem-

bers in the paths of release of the connecting elements.

22. In a device of the character described, the combination with a back, regions thereon for permitting the parallel attachment of a plurality of leaf-sections, and two series of releasable connecting elements at opposite sides of the back comprising corresponding members of pairs of connecting elements located at the several attaching regions; of a retaining-slide mounted for reciprocatory movement on the back adjacent each series of such elements and having solid portions constructed and arranged to bar simultaneously all release of all the adjacent connecting elements and cut-away portions formed to permit such release, and an operating-lever pivoted to and extending across the back and uniting the retaining-slides at such points as to simultaneously position the solid portions of both slides to bar all release of all the connecting elements.

23. In a device of the character described, the combination with a back having a plurality of regions for permitting the parallel attachment of a plurality of leaf-sections, and two series of releasable connecting elements at opposite sides of the back comprising corresponding members of pairs of connecting elements located at the several attaching regions; of means for preventing the removal of the leaf-sections, comprising a retaining-slide mounted for reciprocatory movement on the back adjacent each series of such elements and having solid portions constructed and arranged to bar simultaneously all release of all the adjacent connecting elements and cut-away portions formed to permit such release, an operating-lever pivoted to and extending across the back and uniting the retaining-slides at such points as to simultaneously position the solid portions of both slides to bar all release of all the connecting elements, and a lock secured to the back adjacent one of the slides and in locking relation thereto.

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

ANDREW J. HANSELL.

Witnesses:

L. S. CHASTAIN,
C. TAYLOR.