

J. F. CORDES.
LOOSE LEAF BINDER OR FILE.

APPLICATION FILED APR. 14, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

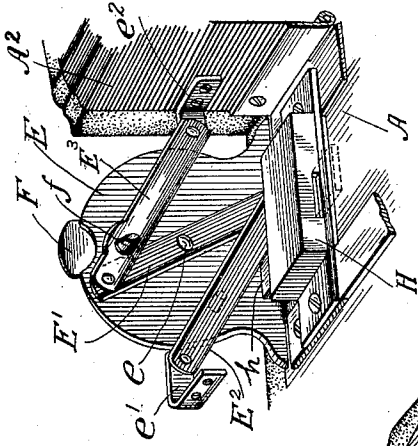


Fig. 5.

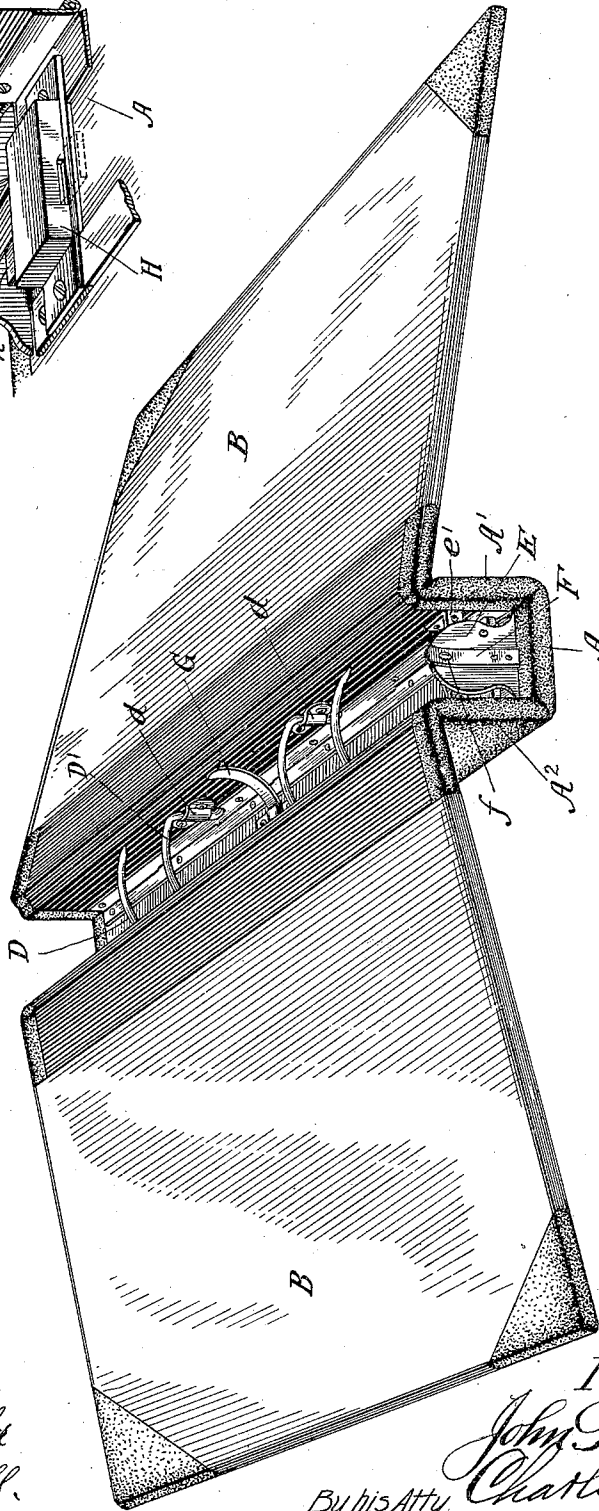


Fig. 1.

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 By his Atty. *Charles W. Rice*

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2 SHEETS—SHEET 2.

Fig. 2.

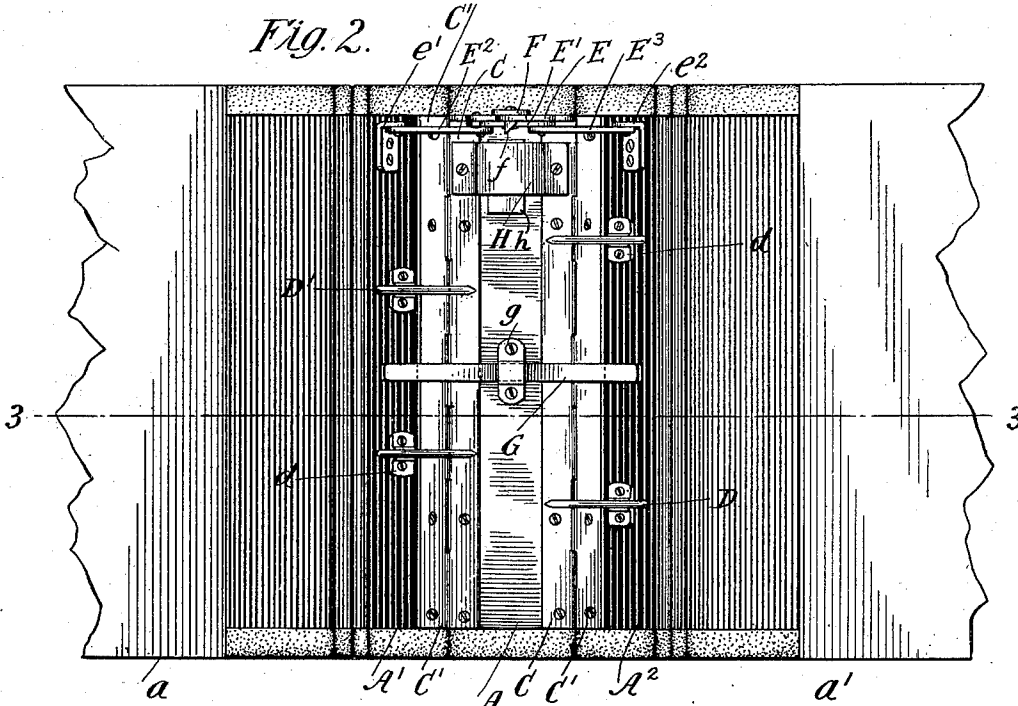


Fig. 3.

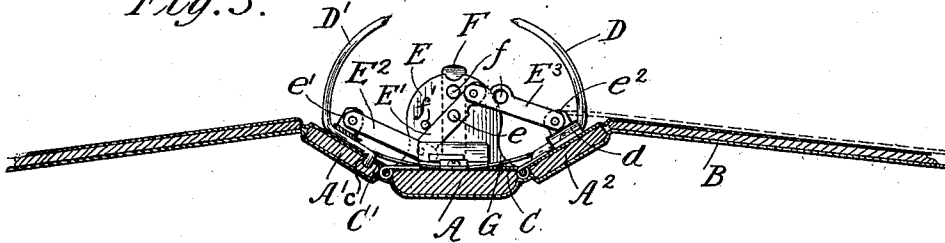
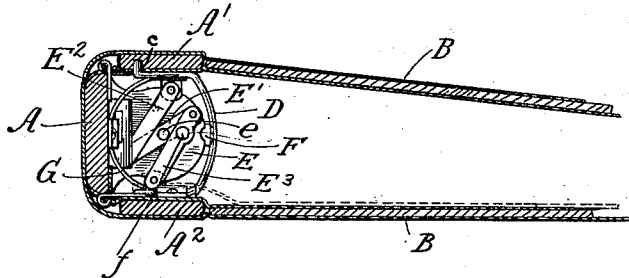


Fig. 4.



Witnesses.

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Inventor.

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By his Atty.

UNITED STATES PATENT OFFICE.

JOHN F. CORDES, OF CHICAGO, ILLINOIS.

LOOSE-LEAF BINDER OR FILE.

SPECIFICATION forming part of Letters Patent No. 747,144, dated December 15, 1903.

Application filed April 14, 1902. Serial No. 102,792. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. CORDES, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Loose-Leaf Binders or Files; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a loose-leaf binder or file, and more particularly to a loose-leaf binder or file designed to hold individual loose sheets and so constructed as to permit ready access to any of said sheets.

The object of the invention is to provide a binder or file so constructed as to permit of securely fastening any desired number of loose or individual sheets within the capacity of this device and adapted to permit ready removal of any one or more of said sheets without disturbing or displacing the remainder of the sheets.

The invention consists of the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a perspective view showing the covers turned back, but showing the retaining devices in closed or retaining position. Fig. 2 is a reduced plan view of the same open, showing the retaining parts in their released or detaching position. Fig. 3 is a transverse section taken on line 3-3 of Fig. 2. Fig. 4 is a view similar to Fig. 3, but showing the covers closed and the retaining devices in their holding position. Fig. 5 is an enlarged perspective view of the latch and locking means.

As shown in said drawings, A indicates the back of the binder, which, as shown, is constructed of a single piece or strip of any rigid material—such as wood, fiber, or metal—and which has hinged on each side thereof the side sections A' and A², respectively, which form the rear portion of the cover and on which are secured the means for engaging the paper or other sheets in the binder. Said side sections are constructed of rigid plates or strips of any desired kind and are hinged for their entire length

at their rear margins with the lateral margins of the back section A, as shown in Fig. 2. Hinged to the front margin of the side sections A' and A² are the cover-sections α and α' , which may be of bookbinder's board or any suitable material, and may be of any desired size or shape. Conveniently the hinges connecting the side sections and the cover-section may be formed by the covering B, of fabric, paper, or other material, which forms the exterior finish for the file in a familiar manner and which conceals the hinges C, connecting the back section with the side sections. A similar material may be secured on the inner side of the cover-section and side section, also forming a part of the hinge for said parts and affording a smooth interior finish.

The hinges C, connecting the side sections with the back, comprise strips of metal C' C', equal in length to the length of the back of the file or binder, and are articulated together by means of a pintle, which extends throughout for the entire length, thus forming a continuous hinge for the entire length of the back and affording a very secure attachment for the side sections. Should the back or side sections be of metal, the edges thereof may be formed to articulate together, forming the hinges integrally with said back or side sections.

Impaling pins or prongs D D' are rigidly secured on the side sections A' A² and extend transversely above the back and are of a length to extend from side to side when the binder is closed. The impaling ends of said prongs are curved or arched upwardly and the other ends are bent to engage in apertures c, extending through the hinge members C' and into the side section, and said prongs are bent to lie flat against the side section above the hinge. Clips or plates d are provided, which engage over said prongs or pins, as shown in Figs. 1 and 2, and are permanently secured upon the side section and act to rigidly secure said prongs in operative position. Obviously the ends engaging in said hinge members may be riveted therein, if preferred. Obviously any number of impaling-pins may be used, as shown in the drawings. However, four of such retaining-prongs or impaling-pins are used, two on each side section,

of which the prongs on the side section A' are placed to fold between those on the side section A². All four of said retaining-prongs act to engage in the sheets, which are perforated to receive the same when the file is in its locking or holding position.

Means are provided for rigidly locking or securing the side sections in a closed or holding relation, as indicated in Fig. 1. Said locking means comprise a plate or bracket E, rigidly secured on the back, preferably at one end and sufficiently narrow to permit the side sections to completely close. Said plate serves as a support or base for the toggle-arm E', which is pivoted at its center on said bracket by means of the pin *e*. At the lower end of said arm a toggle-bar E² is pivoted, the outer end of which engages pivotally on a clip or bracket *e'*, rigidly secured on the side section A'. A like toggle-arm E³ pivotally engages at the upper end of the arm E' and on a like clip *e''*, rigidly secured on the cover-section A². A spring-latch is secured on the outer side of the plate E, comprising the leaf-spring F, adapted for manual engagement and having on its inner side a rigidly-secured stud *f*, which extends through an aperture in the bracket E and into position to engage behind the toggle-arm E' when the side sections are in their closed position or at approximately a right angle with the back, as shown in Fig. 4. As shown in Figs. 2 and 5, said stud *f* is provided near its point with an inclined surface to permit the same to be forced outwardly in the bracket by engagement with the toggle-arm E' as the side sections are in the act of closing. An aperture is provided through the toggle-arm E³ to receive the point of said pin, which when the side sections are in their closed positions snaps past the rear edge of the toggle-arm E' and engages in said aperture of the toggle-arm E³, as shown in Fig. 5, positively locking said toggle-arms in their holding positions.

From the construction described it is evident that a key-operated lock H of any desired construction may be rigidly secured on the back in close relation with the lower or inner ends of said toggle-arms E' and E³ and the bolt *h* of which when shot beneath the toggle-arms, as shown in Fig. 5, acting to rigidly and securely hold the side sections from being released otherwise than by first retracting the bolt, for which purpose the key may be inserted through a suitable aperture in the back. (Not herein shown.)

For the purpose of permitting the file to be easily and instantaneously opened and held in its open position as long as desired a spring G is provided centrally of the same and secured upon the inner side of the back by the clip *g*. The spring, as shown, is a leaf-spring, the ends of which, as shown, engage on each of the side sections and which act when the toggle-arms are released to throw the side sections outwardly into the position shown in Fig. 3. For the purpose of limiting

such outward movement of the side sections a pin *f'* is provided on the inner side of the plate or bracket E, as shown in Fig. 3. Said pin engages the end of one of the toggle-arms at a predetermined point, thus acting to limit the movement and permitting the side sections to be readily closed again by a lateral pressure thereon.

The operation is as follows: The sheets being provided with as many apertures as there are retaining-pins and spaced to correspond with the arrangement of the pins in the binder may be secured on the pins on one or both sides of the binder when the same is in its open position, as shown in Fig. 3. The length and curvature of the pins is such that when the binder is closed the points of the same pass each other and extend into close relation with the side section opposite thereto and passing through the complementary apertures provided therefor in the sheet. When the sheets are placed, the binder may be closed and is ready for use in the usual or any manner. Should it be desired to open the binder, unless the same is locked by means of the lock H it is only necessary to press outwardly upon the spring F, thus releasing the toggle-arms from the stud and permitting the spring G to act, forcing the arms and the side sections outwardly, as shown in Fig. 3. Obviously any desired or preferred number of impaling-pins may be provided on the side sections, and, if preferred, a bracket and toggle-arm or other fastening means may be provided at each end of the back. For binders of ordinary size, however, this is not essential nor desirable.

Obviously many details of construction may be varied without departing from the principles of this invention.

I claim as my invention—

1. In a device of the class described, the combination with a rigid back, of side sections hinged on each side thereof and adapted to fold inwardly, a plurality of curved impaling-prongs secured on each of said side sections and adapted to simultaneously engage in perforated sheets, a bracket, locking means thereon adapted to rigidly secure the impaling-prongs in operative position and a spring engaging each of said side sections and acting when the locking mechanism is released to force the side sections outwardly.

2. The combination with a rigid one-piece back, of rigid side sections hinged at the margins of the back and adapted to be folded inwardly each to form a part of the file-covers, a curved impaling-prong rigidly secured on each of said side sections and adapted to engage perforated sheets when the file is closed, a bracket rigidly secured on the back and locking means carried thereon and acting to simultaneously lock both of the side sections in holding position.

3. The combination with a back, of side members hinged thereto, a bracket secured on the back, toggle-arms pivotally engaged thereon and engaging each of the side sec-

tions and acting to produce similar movement in each simultaneously, a latch carried on said bracket and adapted to engage the toggle-arms when the file is in its closed position, and a spring acting to open the file when said latch is retracted.

4. In a binder of the class described, the combination with a back, of side sections hinged thereto, a bracket secured on the back, a bar pivoted centrally thereon and toggle-arms engaging each end of said bar and engaging respectively on each side section and adapted to cause said side section to open or close simultaneously, and a locking mechanism adapted to engage said toggle-arms when the side sections are in their closed positions.

5. In a device of the class described, the combination of a one-piece back, of side sections hinged thereto, a bracket supported upon the back, a bar pivoted centrally thereon and toggle-arms pivoted on each end of said bar and pivotally secured upon each side section and adapted to permit similar and simultaneous movement of the side sections, a detent yieldingly secured upon the bracket and adapted to positively engage one of said toggle-arms when the side sections are in a closed position, and a leaf-spring engaged transversely of the back and acting on each side section to force the same oppositely.

6. In a loose-leaf binder, the combination with a rigid back and side walls hinged thereto, of a bracket secured on the back, toggle-arms pivotally secured upon the bracket and engaging the side walls, a spring-detent provided with an inclined point adapted automatically to engage the toggle-bars when the side walls are in a closed position, and a lock mechanism secured on the base and adapted to positively lock the toggle-arms in their holding position.

7. In a device of the class described, the combination with a one-piece back, of side sections hinged thereto for their entire length,

curved impaling-prongs secured on each side section and engaging at one end in apertures in the hinges and on the side sections and clips engaging over said prongs and acting to rigidly secure the same in operative position.

8. The combination with a rigid back, of side sections hinged thereto, impaling-prongs bent at one end to engage in apertures in one of the hinge members and rigidly secured on the side section by means of a clip or plate, the other ends of said impaling-prongs being curved and extending transversely of the back.

9. The combination with a rigid one-piece back, of side sections hinged thereto, impaling-prongs rigidly secured on the side sections and extending transversely thereof and above the back, a bracket rigidly secured to the back, locking means thereon for holding the side sections in a closed position, a spring engaged on the back and acting to throw the file open when the locking means are released, and cover-sections hinged at the margins of the side sections and an investing covering of flexible material adapted to provide the hinge for the cover-section and side sections and concealing the hinge between the side sections and back.

10. A temporary binder, comprising a back and side sections, hinges connecting said side sections with the back, impaling-prongs secured on each of the side sections and a locking device comprising a bracket, a resilient latch and means for actuating the side section pivoted on the bracket and adapted to be engaged by the latch.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN F. CORDES.

In presence of—
C. W. HILLS,
ALFRED C. ODELL.