

No. 785,750.

PATENTED MAR. 28, 1905.

P. MONTGOMERY.
LOOSE LEAF BINDER.
APPLICATION FILED DEC. 7, 1904.

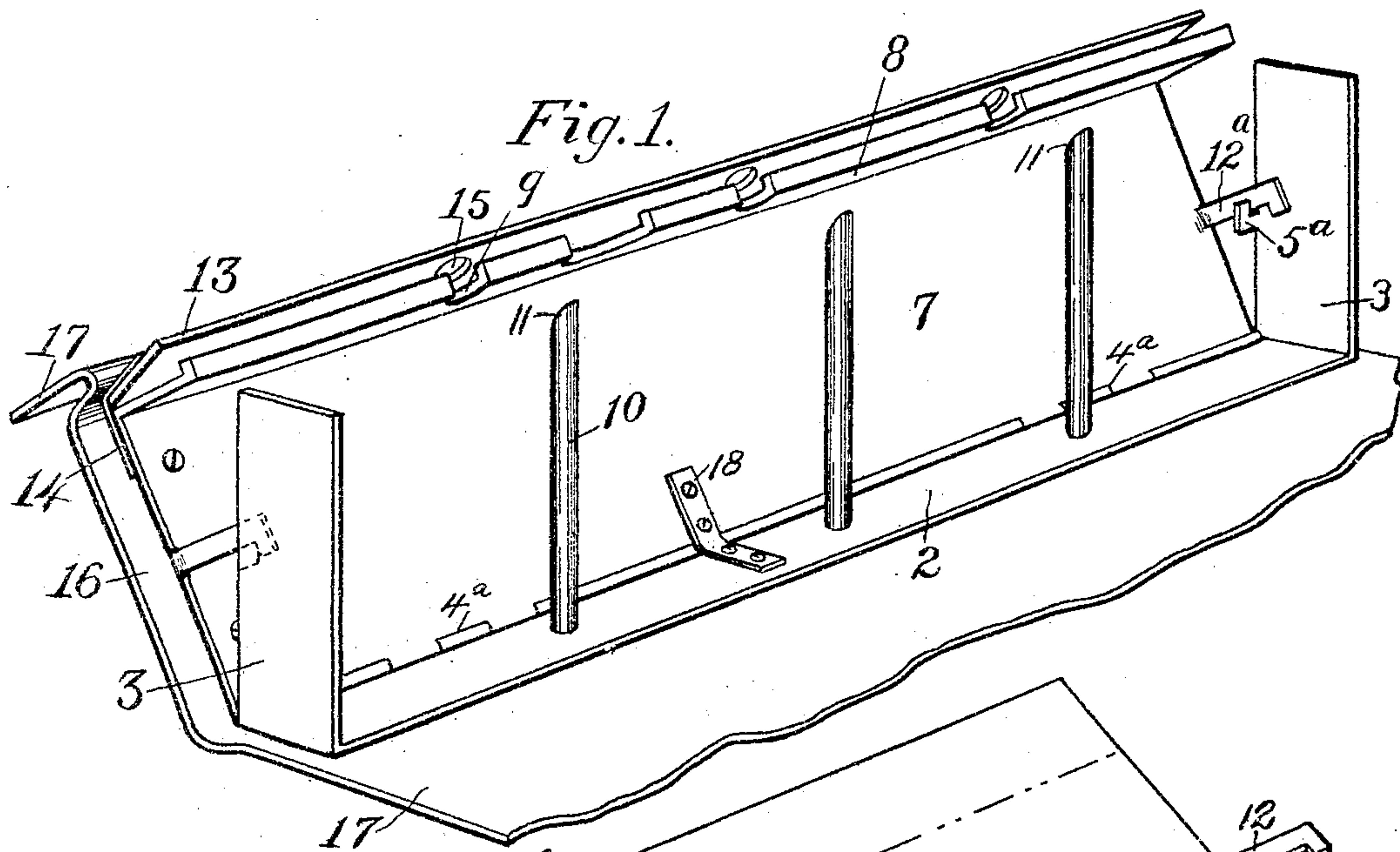


Fig. 2.

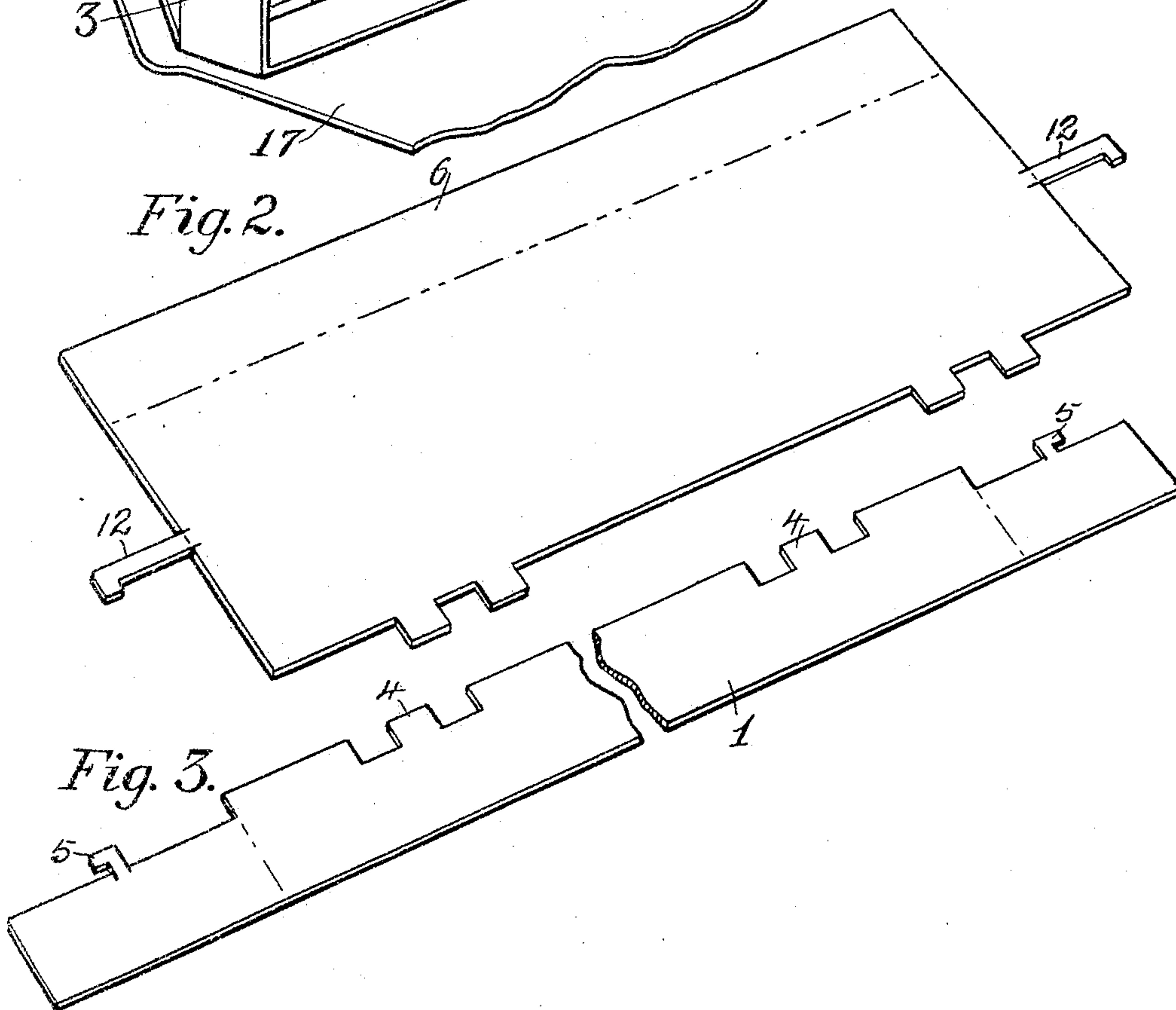


Fig. 3.

Witnesses:

L. L. Schofield.
L. E. Cohen

Inventor:

Inventor.
Philip Montgomery.
By. Jenkins & Baker.
Attorneys

Attorneys.

UNITED STATES PATENT OFFICE.

PHILIP MONTGOMERY, OF HARTFORD, CONNECTICUT.

LOOSE-LEAF BINDER.

SPECIFICATION forming part of Letters Patent No. 785,750, dated March 28, 1905.

Application filed December 7, 1904. Serial No. 235,823.

To all whom it may concern:

Be it known that I, PHILIP MONTGOMERY, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Loose-Leaf Binder, of which the following is a specification.

My invention relates to that class of devices employed for securing sheets of paper so that they may be readily removed and replaced at will either separately or collectively; and the object of my invention is to provide a device of this class that shall be simple and inexpensive in its construction; and a further object of the invention is to provide a device that shall be extremely simple and convenient in its method of operation and use.

A device in the use of which the above objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a binder embodying my invention. Fig. 2 is a view of the blank for forming the back. Fig. 3 is a view of the blank for forming the case.

In constructing a binder in accordance with my invention I provide a case which is formed to shape from a blank 1, as shown in Fig. 3 of the drawings. This blank is preferably cut from sheet metal of proper length and width to form when bent into the shape shown in Fig. 1 of the drawings a case having a bottom 2 and upward-projecting end walls 3. That part of the blank to form the bottom is provided with projections 4, that are properly formed to constitute part of a hinge. The blank is also formed as to those portions which are to form the ends with stop projections 5. When the case is finally formed, the lugs on the bottom are bent into tubular shape to form the members 4^a of a hinge, and the stop projection is bent, preferably, at right angles to the ends 3 to form stops 5^a. The cover of the case is formed of a sheet of metal 6, as shown in Fig. 2 of the drawings, this part being of proper dimensions to form when bent to shape a back 7 and a top 8, the former preferably being adapted to lie against the edge of the ends and bottom of the case and the latter to overlie the upper ends of the end pieces 3 of the case. Slots 9, extending later-

ally of the top, are provided for the reception of pins 10, secured in the bottom portion of the case, each of the pins bearing at their outer ends a beveled portion 11. The blank forming the cover is also provided with catch projections 12, which in final form are bent, preferably, at right angles to the back of the cover, forming catches 12^a. The catches and stops are preferably of hook form, as shown in Fig. 1 of the drawings, and are adapted to engage and interlock with each other. A lock-plate 13 is hinged on the outer surface of the top 8 of the cover, being secured, as by means of springs 14, which serve the double purpose of a hinge to allow a slight swinging movement of the plate and also as a spring to hold it firmly against the outer surface of the cover 8. This lock-plate is provided with openings 15, adapted to receive the pins 10.

This binder preferably includes in its construction a cover consisting of a back 16 and leaves 17, flexibly united to the back in the usual manner.

In the normal location of the parts the leaves to be bound, having first preferably been perforated with holes in proper position to receive the pins 10, are located upon the pins and the cover is in its closed position with the back 7 and the top 8 resting against the back and end edges of the case, the lock-plate 13 being closed down and the pins 10 passing through the slots 9 into the openings 15, which lock the parts closed. When it is desired to remove a leaf, the plate 13 is swung upward to disengage it from the ends of the pins 10. It will be noted that in this movement to swing the plate 13 to disengage it from the pins pressure is applied to the cover in a direction to swing it as to its upper end away from the case, and this swinging movement is also aided by a spring 18, secured to the bottom 2 and the back 7, which spring tends to hold the cover as to its upper end swung away from the case. When the cover has swung the proper distance to cause the ends of the pins 10 to be disengaged and to be freely accessible, the catches 12^a engage with the stops 5^a, limiting the backward swinging movement of the cover. It will be noted that the cover is thus maintained in a conven-

ient and accessible position to be closed when desired, the back 16 being raised so that the hand may be readily placed behind it to close the parts, the edge of the plate 13 engaging the beveled edges 11 of the pins 10, causing the plate to be raised until the ends of the pins are located opposite the openings 15, when the plate swings down and locks the cover in position.

10 In prior devices of this class a difficulty has been experienced from the fact that both hands in many instances are required to release the cover from the case and when released the cover swings down flat and difficultly is experienced in placing the hand underneath the cover to close the device. It will be seen that by my improved construction the back is always retained in a convenient and accessible position, and the device as soon as the lock-plate is released is self-acting to open to an extent to allow the pins to be readily accessible for the purpose of removing or inserting papers.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and consisting of a back and a top rigidly secured thereto to overlie the top of the case, said top having slots for the reception of the pins, means for locking the cover and case together, and self-acting means for swinging the cover from the case.

2. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and including a back and top rigidly secured thereto to overlie the case, said top having slots for the reception of the pins, means for locking the top in engagement with the pins, and a stop to limit backward swinging movement of the cover.

3. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover including a back and a top rigidly secured thereto to overlie the top of the case, said top having slots for the reception of said pins, means for locking the pins and top in engagement, self-acting means for swinging the cover away from the case, and stops to limit the swinging movement of the cover.

4. In a loose-leaf binder, a case, a cover pivoted to the case and including a back and top rigidly secured thereto to overlie the case, said top having slots for the reception of pins, pins projecting upward from the bottom of the case to engage said slots, and a lock-plate pivotally united to the cover and having openings to receive the ends of the pins.

5. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover including a back and a top rigidly secured thereto to overlie the case, said top having slots for the reception of the pins, self-

actuating means for swinging the cover away from the case, and a lock-plate hinged to said top and having openings for the reception of the ends of the pins.

6. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover including a back and a top rigidly secured thereto to overlie the case, said top having slots to receive said pins, a lock-plate pivoted to the top and having openings to receive the ends of the pins, and a stop to limit the backward swinging movement of the cover.

7. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the bottom of the case for backward swinging movement and including a back and top rigidly secured thereto to overlie the case, said top having slots for the reception of the pins, and a lock-plate pivoted to the back of the top whereby force applied to lift the plate is also applied to swing the cover backward, said lock-plate having openings for the reception of the ends of the pins.

8. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the back of the bottom of said case and including a back and a top rigidly secured thereto to overlie the case, said top having slots for the reception of said pins, a lock-plate pivoted to the back of the top whereby force applied to lift the plate will be transmitted to the cover to cause it to swing backward, said lock-plate having openings for the reception of the ends of the pins, and means for holding the lock-plate normally against the top of the cover.

9. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover including a back and a top rigidly secured thereto to overlie the case, said cover having slots for the reception of the pins, a plate secured to the back of the top of the cover by a spring-hinge tending to hold the plate normally in engagement with the cover whereby force applied to lift the plate will be transmitted to the cover to cause it to swing backward, said plate having openings for the reception of the pins.

10. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover pivoted to the back of the bottom of the case and including a back and a top rigidly secured thereto, the latter having slots for the reception of said pins, a lock-plate pivoted to the back of the top whereby force applied to the plate to lift it will be transmitted to the cover to swing it backward, self-actuating means for swinging the cover backward, and means for holding said plate against the top of the cover.

11. In a loose-leaf binder, a case, a cover pivoted to the back of the bottom of the case and including a back and a top rigidly secured thereto to overlie the case, said top having

slots for the reception of the pins, self-actuating means for swinging the cover backward, means for limiting the backward swinging movement of the cover, and a lock-plate pivoted to the back of the top of the cover where-
 5 by force applied to lift the plate will be transmitted to the cover to swing it backward, said plate having openings for the reception of the ends of the pins, and means for holding the
 10 plate against the top of the cover.

12. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and including a back and a top rigidly secured thereto with slots for
 15 the reception of the pins, self-actuating means for swinging the cover away from the case, and interengaging hooks on the case and cover for limiting the backward movement of the latter.

20 13. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and including a back and a top rigidly secured thereto to overlie the top of the case, said top having slots for the
 25 reception of pins, and means for locking the cover and case together.

14. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and including a back
 30 and a top rigidly secured thereto to overlie the top of the case, said top having slots for the reception of pins, and a lock-plate movably supported by the cover and adapted to engage the pins to lock the cover and case together.

35 15. In a loose-leaf binder, a case, pins projecting upward from the bottom of the case, a cover hinged to the case and including a back and a top rigidly secured thereto with slots for the reception of the pins, and interengaging
 40 hooks on the case and cover for limiting the backward movement of the latter.

16. In a loose-leaf binder, a case consisting of a piece of metal having its ends upturned to form the ends of the case, pins projecting upward from the bottom of the case, a cover
 45 including a back constituting one wall of the case and a top rigidly secured to the back and forming the top of the case, said top having slots for the reception of pins, means for locking the cover in its closed position, and means
 50 for limiting the backward movement of the cover.

17. In a loose-leaf binder, a case including a bottom with its ends upturned to form the ends of the case, pins projecting upward from
 55 the bottom of the case, a cover hinged to the case and constituting the back thereof, and with a top rigidly secured thereto constituting the top of the case, said top having slots for the reception of the pins, a lock-plate
 60 movably supported by said top and having openings for the reception of the pins to lock the cover in its closed position, and means for limiting the backward swinging movement of the cover.
 65

18. In a loose-leaf binder, a case composed of a piece of metal having its ends upturned to form the ends of the case, pins projecting upward from the bottom of the case, a cover
 70 hinged to the bottom of the case to form one wall thereof and having a top rigidly secured thereto to overlie and form the top of the case, said top having slots for the reception of pins, a lock-plate pivoted to the back of the top and overlying the same and having open-
 75 ings for the reception of said pins, and means for limiting the backward movement of the cover.

PHILIP MONTGOMERY.

Witnesses:

WM. H. BARKER,
 L. E. BERKOVITCH.