(No Model.) 2 Sheets—Sheet 1.

J. S. McDONALD, Jr.

TEMPORARY BINDER.

No. 574,932. Patented Jan. 12, 1897.

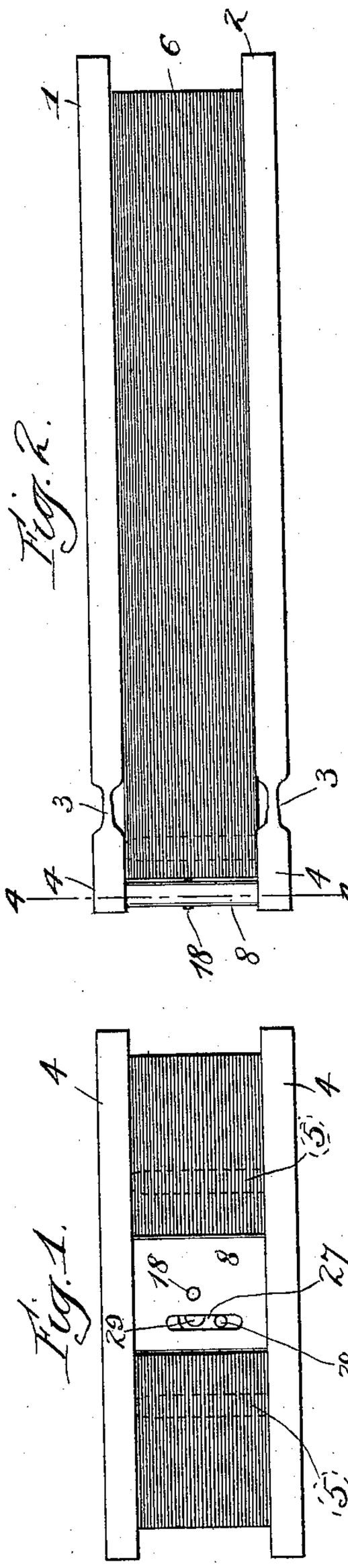

Fig. 2.

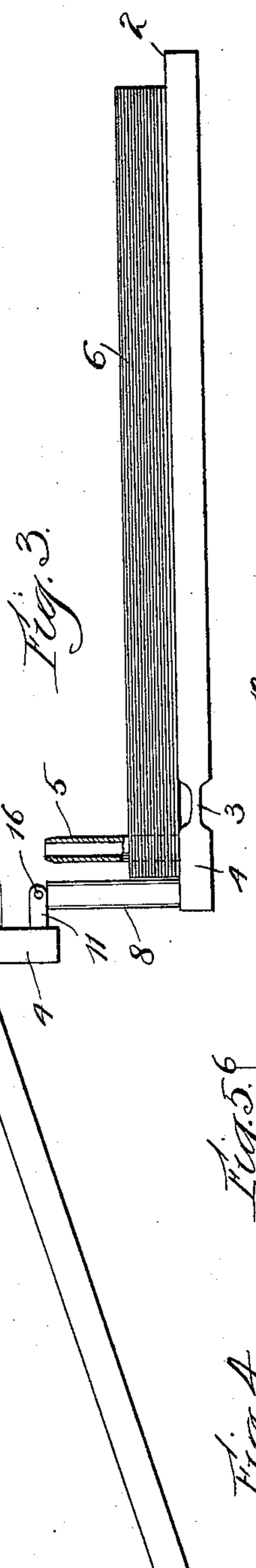

Fig. 3.

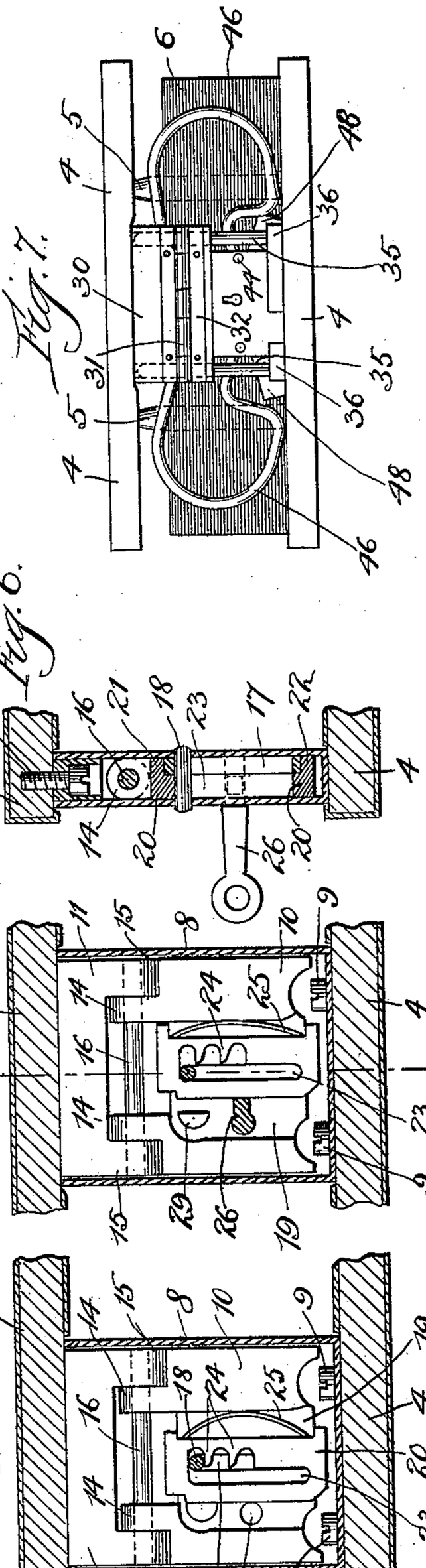

Fig. 7.

Fig. 6.

Fig. 5.

Fig. 4.

Fig. 1.

Witnesses
Wm. J. Fleming
Wm. N. Rhem

Inventor
J. S. McDonald Jr.
by Elliott & Hopkins Attys.

(No Model.) 2 Sheets—Sheet 2.

J. S. McDONALD, Jr.

TEMPORARY BINDER.

No. 574,932. Patented Jan. 12, 1897.

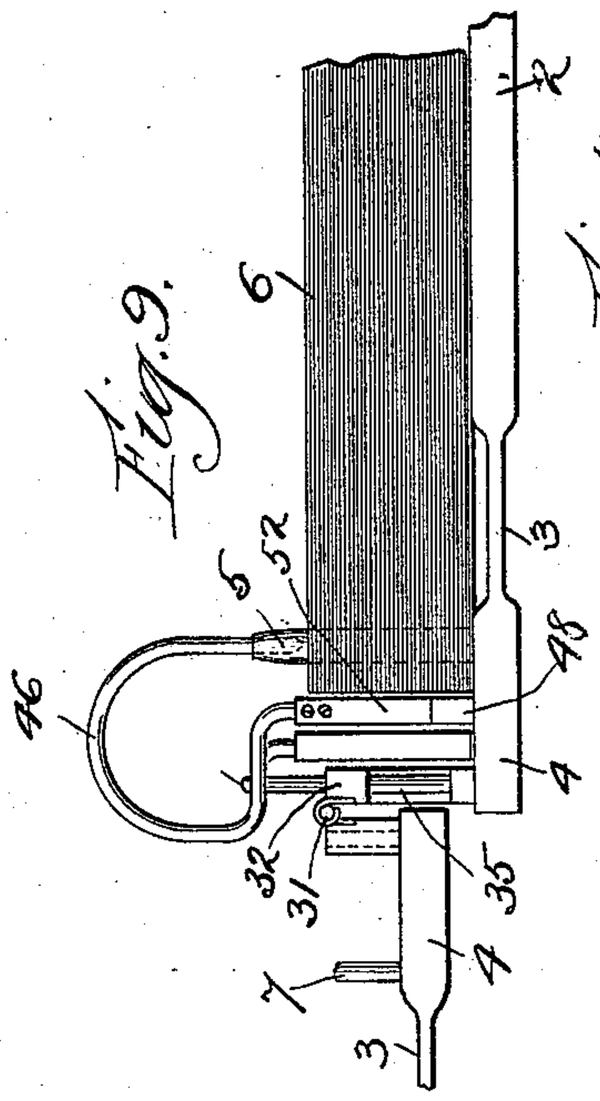

Fig. 9.

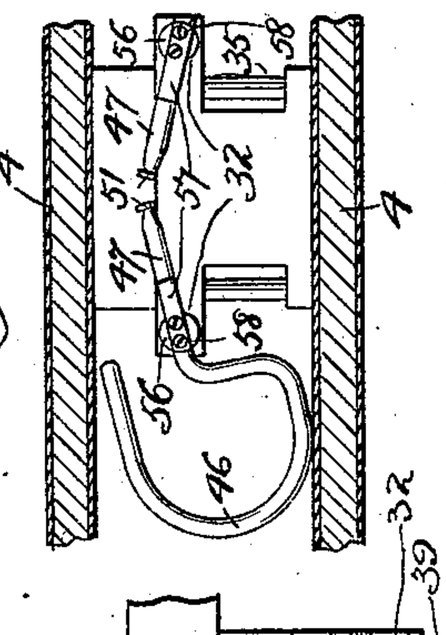

Fig. 13.

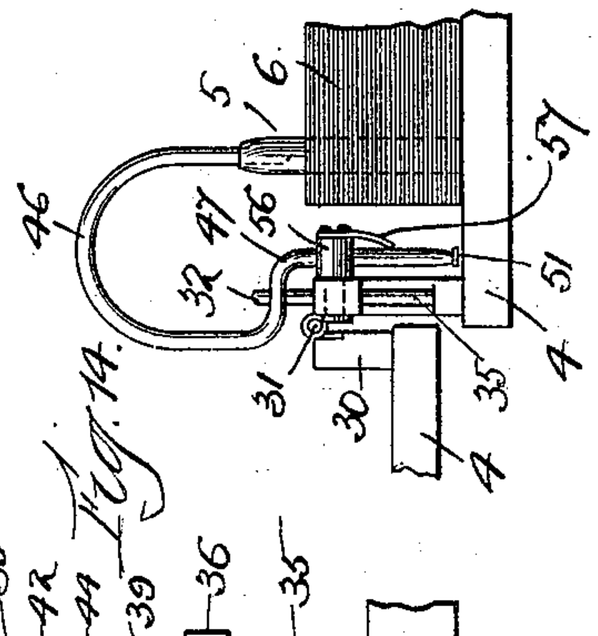

Fig. 14.

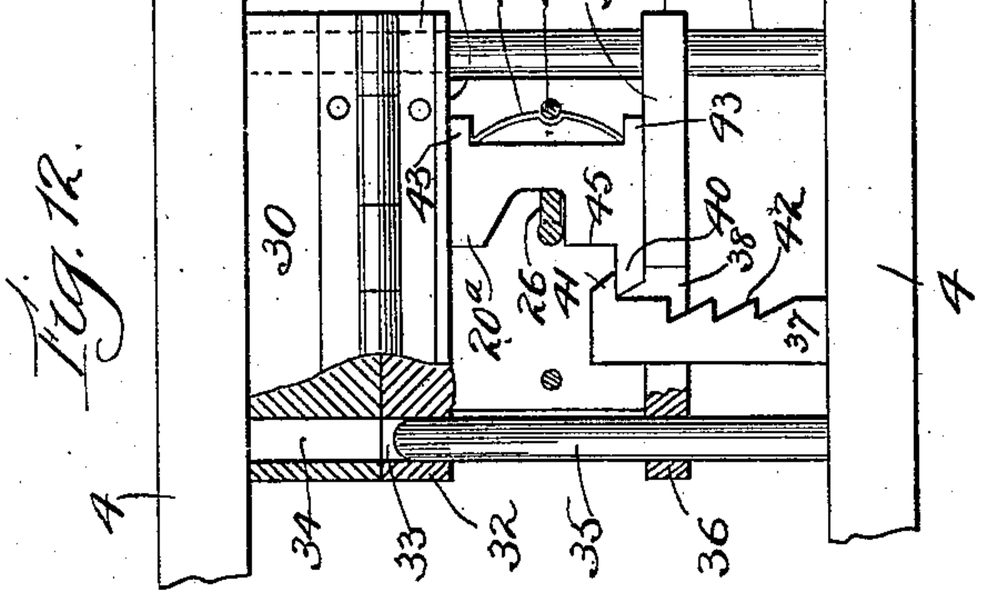

Fig. 12.

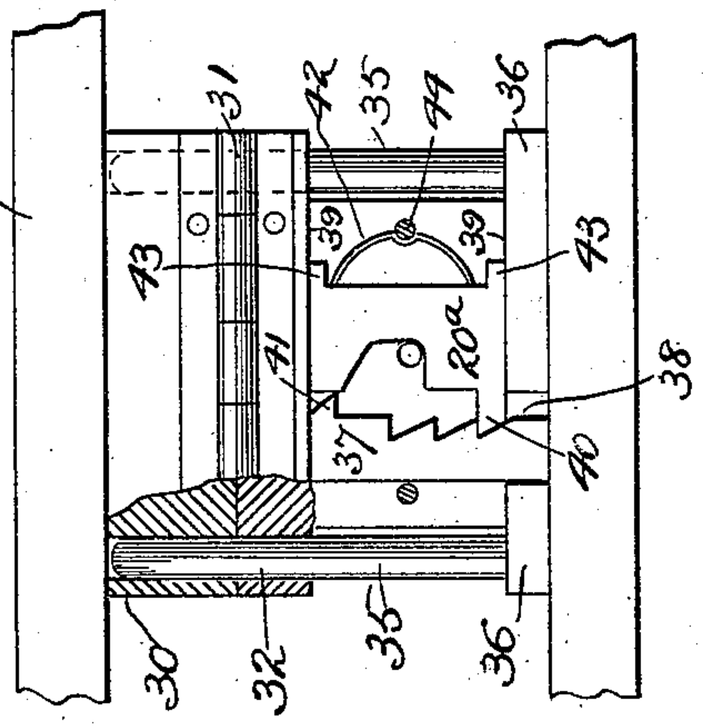

Fig. 11.

Fig. 8.

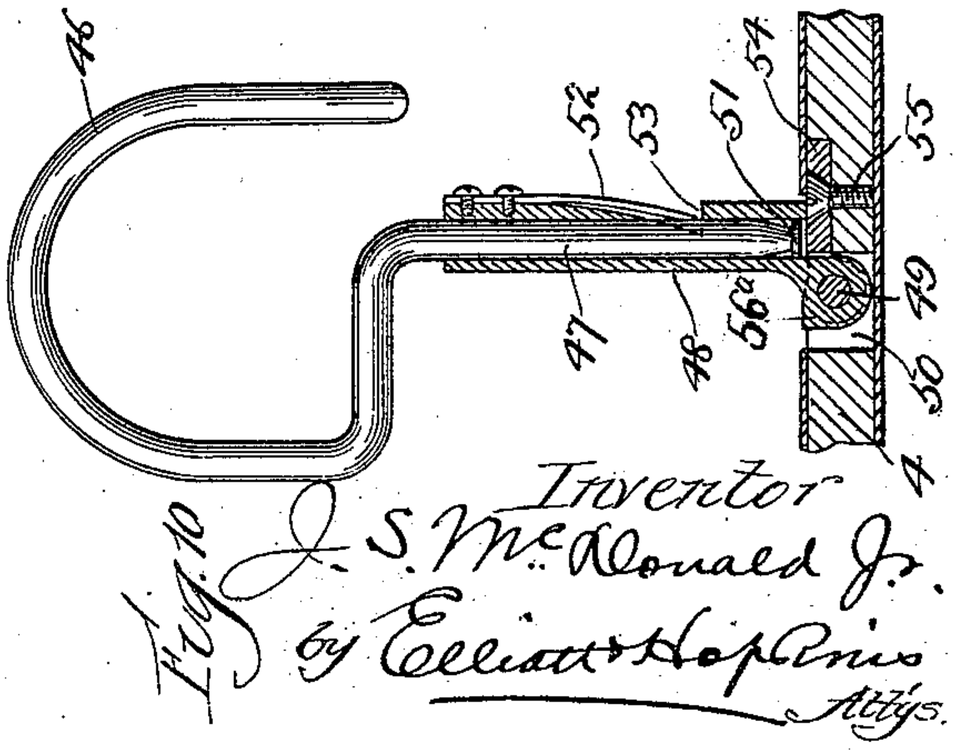

Fig. 10.

Witnesses
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Inventor
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by Elliott & Hopkins
Attys.

UNITED STATES PATENT OFFICE.

JAMES S. McDONALD, JR., OF CHICAGO, ILLINOIS.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 574,932, dated January 12, 1897.

Application filed December 9, 1895. Serial No. 571,500. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. McDONALD, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Temporary Binders, of which the following is a full, clear, and exact specification.

My invention relates to temporary binders, but more especially to that class of such binders commercially known as "loose-ledger-sheet" binders, employed for binding loose sheets of books of account, whereby a sheet or sheets containing any particular account may be removed from the book when the account is closed or at any other desired time without rendering the remaining sheets insecure or unstable. In devices of this character it is usual to employ two back boards or covers, one of which is provided with filing or impaling pins for holding the sheets, and the two being secured together by a lock arranged at that part which corresponds to the back of the book, so that by unlocking the lock the covers may be separated to permit the sheets to be withdrawn from the impaling-pins. One of the great objections to these devices as heretofore constructed is that the covers become entirely detached when unlocked, and this often leads to serious error in replacing the covers, inasmuch as the covers of different books often become exchanged; and a further objection is the inconvenience of having the loose covers lying about the desk. My invention is designed to overcome these and other objections hereinafter specified; and it therefore has for its primary object to secure the covers together in such a way that they may be locked or fixed at various distances apart, and yet one may be folded back, when desired, for exposing the ends of the filing or impaling pins without becoming detached from the other.

A further object of my invention is to provide the device with transfer hooks or wires arranged in a neat and compact form and adapted to be placed out of the way when not needed.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a back or rear end view of a temporary binder constructed according to my invention. Fig. 2 is a side or edge view thereof. Fig. 3 is a similar view showing the covers unlocked and one thrown back out of the way. Fig. 4 is an enlarged detail vertical section, taken on the line 4 4, Fig. 2, showing the interior of the lock. Fig. 5 is a similar view showing the key in the act of releasing the locking-dog to permit the covers to be pulled apart. Fig. 6 is a vertical transverse section thereof, taken on the line 6 6, Fig. 5. Fig. 7 is a view similar to Fig. 1, showing the device equipped with my improved transfer hooks or wires, and also illustrating a modification in the form of lock hereinafter described. Fig. 8 is a plan view thereof, showing the covers thrown apart. Fig. 9 is a side view of the same, showing the transfer hooks or wires in position for receiving the sheets from the impaling-pins. Fig. 10 is an enlarged detail view of one of the transfer wires or hooks, showing its socket and a part of one of the covers in section. Fig. 11 is a face view of the form of lock shown in Figs. 7 and 8, with a part of the casing or face-plate of the lock removed and disclosing the interior mechanism. Fig. 12 is a similar view showing the key releasing the lock and its portions or members drawn apart. Fig. 13 is a view looking toward the inner face or side of the lock, the covers being in cross-section, illustrating a modified form of transfer hooks or wires; and Fig. 14 is a side view thereof, illustrating the transfer-wires in position for receiving the sheets from the impaling-pins.

Like signs of reference indicate like parts throughout the several views.

1 and 2 represent, respectively, the upper and lower covers or backs of the binder, which are provided with flexible portions or hinges 3, as usual, forming on each a narrow rigid strip 4, from the lower one of which rises the usual hollow impaling or filing pins 5, upon which the ledger or other loose sheets 6 are placed in the usual manner. 7 represents the guard-pins depending from the strip 4 of the

upper or top cover 1 and adapted to enter the hollow pins 5, and thus prevent the sheets 6 from slipping off the pins 5 when the thickness of the pile of sheets increases beyond the height of the pins 5.

In the simple form of my invention shown in Figs. 1 to 6, inclusive, the main body portion or casing 8 of the lock is secured rigidly to the strip 4 of the bottom cover 2 in any suitable manner, such, for instance, as by means of the screws 9, arranged within the casing 8 and passing through the lower side thereof into the strip 4. Located within the casing 8 is a vertically-sliding plate 10, to whose upper edge is hinged, in any suitable manner, a plate 11, which is rigidly secured by means of screws 13 to the strip 4 of the upper cover 1. These two plates 10 and 11 may be hinged or pivotally connected together by providing the former with perforated ears 14 and the latter with corresponding ears 15, and passing a pin or rod 16 through them, so that when the covers 1 and 2 are forced together the plates 10 and 11 will be wholly received by the casing 8 and the hinge-joint between them held against flexure, but when the covers are pulled apart a sufficient extent to bring the pivot or pin 16 above the upper end of the casing and the pins 7 out of the pins 5 the upper strip 4, together with the cover 1, may be folded back out of the way in the manner shown in Fig. 3.

In order that the plate 10 may be locked within the casing 8 with the cover 1 at the desired distance from the cover 2, the plate 10 is provided with a vertical slot 17, through which passes a transverse pin 18, having its end secured in the casing 8. This pin 18 and slot 17 permit the plate 10 to be withdrawn the desired extent when the lock is released, but prevent it from entirely leaving the casing 8. The plate 10 is provided with a recess or mortise 19, in which is arranged a transversely-sliding dog 20, whose upper and lower edges are provided with flanges 21 22, respectively, which engage over and enter the upper and lower edges of the plate 10, and thus support the dog 20 and hold it from moving vertically independently of the plate 10. The locking-dog 20 is provided with a vertical slot 23, in one side of which is formed a number of notches or teeth 24, and located between the dog 20 and one edge of the mortise 19 is a cushion or spring 25, which presses the dog normally toward the pin 18 and holds one of the teeth or notches 24 normally in engagement with such pin, and consequently locks the plate 10 against vertical movement while so held.

When the dog 20 is forced to the right or against the spring 25, so that the slot 23 therein will coincide with the slot 17 in the plate 10 in the manner shown in Fig. 5, the plate 10 together with the dog 20 will be free to rise within the casing 8, and may be pulled out until the lower ends of the slots 17 23 have reached the pin 18, or until the distance between the covers has been increased the desired extent, whereupon the release of the dog 20 will result in its reëngagement with the pin 18 by means of another one of its teeth or notches 24. In order that the dog 20 may be thus forced against the spring 25 for releasing it from the pin 18, I employ an ordinary key 26, which is inserted through a slot 27 in the casing 8 and lodged in a perforation or socket 28 in the mortise or recess 19 of the plate 10, so that the beard of the key 26 will press against the dog 20 when the key is turned and force the same out of engagement with the pin 18 in the manner shown in Fig. 5. The slot 27 in the casing 8, being vertically elongated, permits the key to rise with the plate 10.

29 is a stop formed on the plate 10 for limiting the movement of the dog 20.

In the form of my invention shown in Figs. 7 to 12, inclusive, the upper strip 4 of the cover 1 is provided with a block or plate 30, rigidly secured thereto in any desired manner and provided with a hinge connection 31 with the body portion or casing of the lock. The hinge 31 is located at the outer edge or corner of the plate 30, as shown in Fig. 9, so that the upper cover 1 and its strip 4 may be folded down out of the way, as shown in Fig. 9. The body portion of the lock in this form of my invention is provided on each side with an extension or slot portion 32, to which the hinge 31 is secured and through which on each side is formed a perforation or passage 33, which corresponds with a similar perforation or passage 34, formed in the upper portion or plate 30 and coinciding with the perforation 33. These perforations or passages 33 34 on each side receive the upper end of a vertical guide-rod 35, which is securely planted in the lower strip 4, and which rod 35 also passes through a perforated ear or extension 36, formed on the lower side or edge of the lock-casing. By this means it will be seen that the entire lock body or casing may slide up and down on the rods 35 when the lock is released or unlocked, and that such rods 35 will hold the body portion of the lock and the plate 30 firmly in alinement and prevent the hinge from turning until the upper cover has risen sufficiently far to bring the lower ends of the passages 34 above the upper ends of the guide-rods 35 in the manner shown in Fig. 12, whereupon the upper cover 1 together with its strip 4 may be folded back out of the way in the manner shown in Fig. 9. In this form of my invention the lower strip 4 is provided with a rack or notched bar 37, rigidly secured thereto in any desired manner and passing upwardly through an opening 38 in the lower side of the lock-casing, and located within the lock-casing is the locking-dog 20^a, which, in this instance, is held against independent vertical movement by means of flanges 39, formed in the lock-casing. The locking-dog 20^a is provided with a tooth 40, which is adapted to engage with any one of

the teeth 41 42 of the rack 37, the tooth 40 being normally forced into engagement with the rack 37 by means of a spring 42, interposed between the projections 43 on the dog 20ª, and a lug or pin 44 on the lock-casing.

The tooth 40 of the locking-dog 20ª may be thrown out of engagement with any one of the teeth 42 by means of the key 26 to permit the covers to separate as the book increases in size or to permit them to be separated and thrown apart when it is desired to remove the leaves from the impaling-pins 5, and, if desired, the dog 20ª may be provided with the shoulder 45, so that by a reverse movement of the key 26 the dog may be still farther pushed to the right and the tooth 40 disengaged from the tooth 41, whereupon the body of the lock will be entirely disengaged from the rack 37 and may be completely removed from the guide-rods 35.

Located between the upper ends of the sheets 6 and the inner side of the lock-casing are transfer hooks or wires 46, which are hinged so as to be capable of folding down in a horizontal position, and are also swiveled on vertical axes, so as to be capable of turning transversely of the sheet 6 and folded down into the space between the ends of the sheets and the lock in the manner shown in Figs. 7 and 8. To accomplish this, I locate the stem 47 of each of the transfer hooks or wires 46 in a socket 48, which is hinged at its lower end by pivot 49 in a recess 50 of the lower strip 4, the hinge 49 being arranged transversely of the lock, so that the sockets 48 may be folded down flat against the strip 4 between the lock and the ends of the sheets 6. The stem 47 is capable of reciprocating within the socket 48, so that the hook 46 may be raised and inserted into the hollow impaling-pins 5, and in order that the stem 47 may not be accidentally entirely withdrawn from the socket 48 I provide its lower end with a flange or notch 51, with which engages a spring-catch 52, secured to the socket 48 and projecting through a suitable slot or opening 53 therein, and also serving as a friction-hold for holding the hooks 46 in their elevated position and out of the way while the sheets are being removed from or replaced on the impaling-pins 5.

As shown in Fig. 8, the sockets 48 are so mounted in the strips 4 that the hooks 46 will be in different vertical planes when folded down out of the way, the hinges being so formed and arranged that the sockets will fold toward one another and the hooks will pass each other.

The sockets 48 may be secured to the strip 4 in any desired manner. I have shown plates 54, set in the upper surface of the strip 4 and held in place by screws 55 and having ears 56ª, depending into the recesses 50, and having the lower end of the sockets 48 connected to them by means of the pin 49, as before described.

In the form of my invention first described the transfer hooks or wires 46 are not shown, but it is nevertheless obvious that the same are equally applicable to such form of my invention.

In Figs. 13 and 14 I have shown a modification in the manner of mounting the transfer wires or hooks and by which such wires or hooks are constituted a part of the body portion of the lock. In this form the portion 32 of the lock is extended considerably on each side, as shown in Fig. 13, and has mounted therein a swivel 56, which turns on a horizontal axis. Each of these swivels 56 is provided with a transverse perforation through which is passed the stem 47 of the transfer-hook, so that the stem may be reciprocated vertically to permit the points of the hooks to be inserted in or withdrawn from the impaling-pins 5, and when withdrawn to be turned transversely of the swivels 56 and then folded down between the lock and the ends of the sheets 6, so as to be out of the way of the covers, in the manner shown in Fig. 13. These swivels 56 constitute sockets for the stems 47, and they are provided with friction-springs 57, secured thereto by means of rivets or screws 58 and bearing against the stems 47 in such a manner as to engage with the notches or flanges 51 thereon and thus limit the upward movement of the stem 47 and press normally against such stems for holding the hooks at the desired elevation.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A temporary binder having in combination two covers, a hinge secured to one of said covers and being movable bodily with relation to the other cover and means for adjustably locking said hinge to the said other cover, substantially as set forth.

2. A temporary binder having in combination two covers, a hinge secured to one of said covers and being capable of bodily movement independently of the other of said covers, means for holding said hinge against turning and means for locking said hinge to the said other cover, substantially as set forth.

3. A temporary binder having in combination two covers, a hinge secured to one of said covers and being capable of bodily movement independently of the other, guides for holding said hinge from turning throughout a portion of its movement and means for locking said hinge against bodily movement, substantially as set forth.

4. A temporary binder having in combination two covers, a hinge secured to one of said covers and having two parts provided with registering perforations or passages, a guide secured to the other of said covers and fitting in said registering perforations or passages, and means for locking said hinge to the cover to which said guide is secured, substantially as set forth.

5. A temporary binder having in combina-

tion two covers, a hinge secured to one of said covers, a lock secured to said hinge, a toothed rack secured to the other of said covers and said lock being provided with a locking-dog for engaging with the teeth of said rack, substantially as set forth.

6. A temporary binder having in combination two covers, a hinge secured to one of said covers, a lock secured to said hinge and having a locking-dog, a toothed rack secured to the other of said covers and having the teeth 42 and the tooth 41 projecting beyond the teeth 42 and adapted to be engaged by said locking-dog, said locking-dog being provided with the shoulder 45 whereby it may be entirely released from said toothed rack, substantially as set forth.

7. A temporary binder having in combination two covers, the plate 30 secured to one of said covers, the plate or portion 32 hinged to said plate 30, said plates being provided with registering perforations 33, 34, a lock secured to the plate 32, a toothed rack secured to the other of said covers and projecting up into said lock for engagement with the locking-dog thereof, and guide-rods 35 secured to said latter cover and projecting up into said perforations 33, substantially as set forth.

8. A temporary binder having in combination a pair of hinged covers, the impaling-pins projecting from one of said covers, and a transfer wire or hook mounted on vertical and longitudinal axes upon said cover whereby it may be joined with said impaling-pin or turned and folded down out of the way, substantially as set forth.

9. A temporary binder having in combination a pair of covers adapted to be secured together, a socket swiveled or mounted to turn on a horizontal axis and a transfer hook or wire having its stem mounted in said socket and adapted to turn on a vertical axis, substantially as set forth.

10. A temporary binder having in combination a pair of covers detachably secured together, a socket hinged to one of said covers on a horizontal axis, and a transfer-hook having a stem reciprocally mounted in said socket, substantially as set forth.

11. A temporary binder having in combination a pair of covers detachably secured together, one of said covers being provided with impaling-pins, a socket mounted upon said cover on a horizontal axis, a transfer-hook having its stem reciprocally mounted in said socket and provided with a notch or stop thereon, and a friction-spring bearing against said stem, substantially as set forth.

12. A temporary binder having in combination a pair of covers hinged together, impaling-pins secured to one of said covers, a pair of sockets mounted upon one of said covers, and adapted to turn on horizontal axes toward each other and transfer-hooks having their stems reciprocally mounted in said sockets, substantially as set forth.

13. A temporary binder having in combination a pair of covers hinged together, one of said covers being provided with an impaling-pin, a socket mounted upon a horizontal axis between the hinge of said cover and said impaling-pin, and a transfer-hook having its stem reciprocally mounted in said socket whereby it may be folded down between the hinge of said covers and said impaling-pin, substantially as set forth.

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Witnesses:
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Edna B. Johnson.