

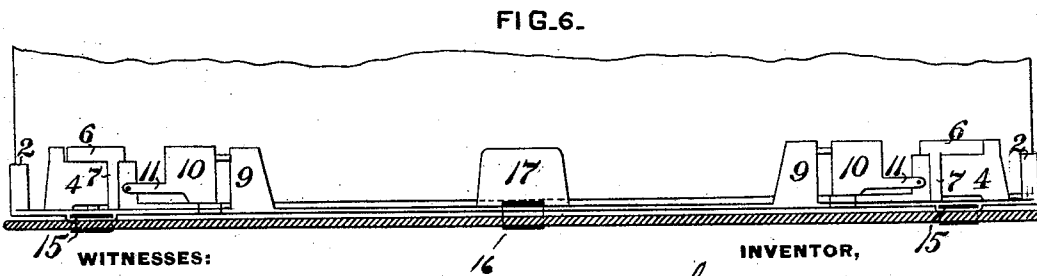
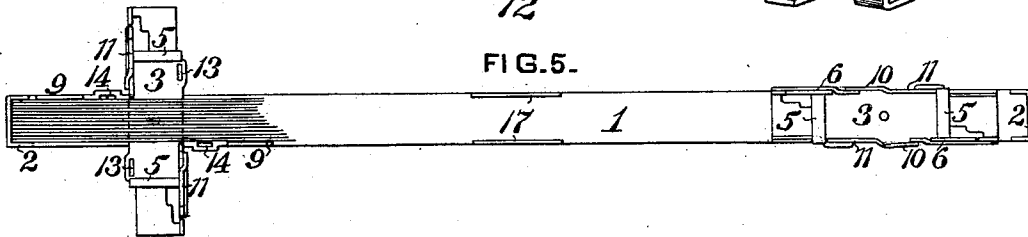
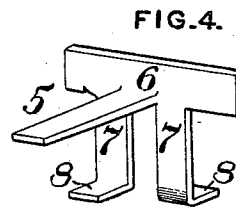
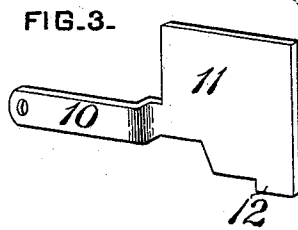
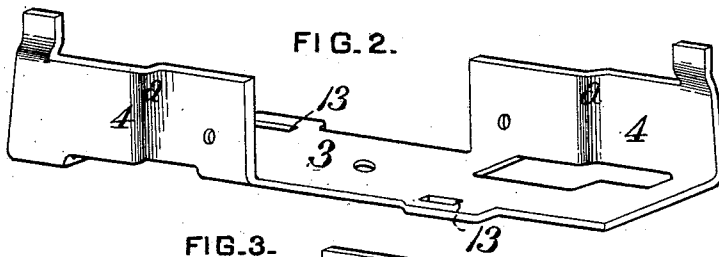
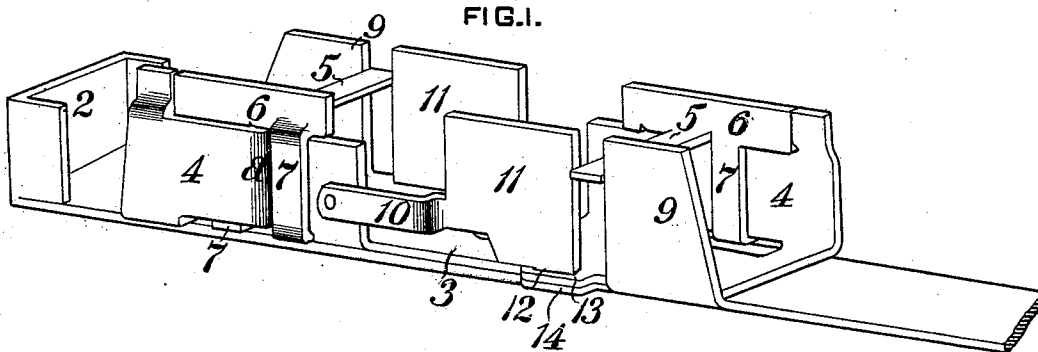
(No Model.)

2 Sheets—Sheet 1.

G. H. WINSLOW.
BINDER FOR LEAVES.

No. 484,275.

Patented Oct. 11, 1892.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

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BINDER FOR LEAVES.

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FIG. 7.

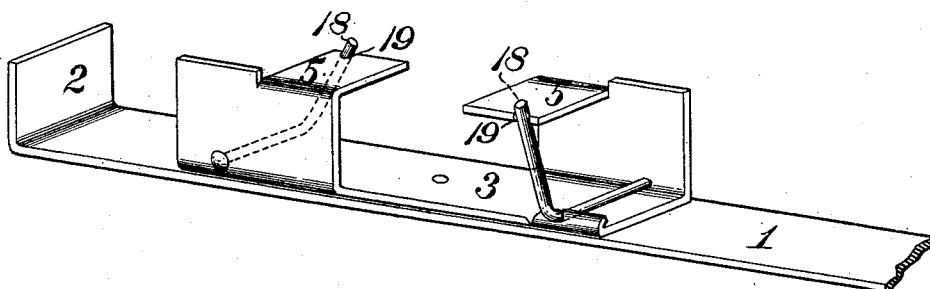


FIG. 8.

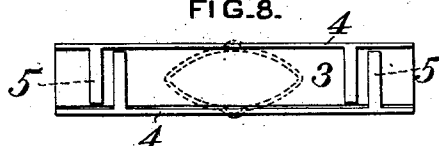


FIG. 9.

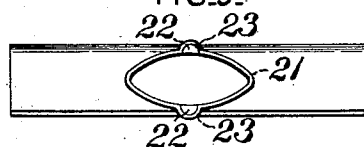


FIG. 10.



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UNITED STATES PATENT OFFICE.

GEORGE H. WINSLOW, OF PITTSBURG, PENNSYLVANIA.

BINDER FOR LEAVES.

SPECIFICATION forming part of Letters Patent No. 484,275, dated October 11, 1892.

Application filed March 31, 1892. Serial No. 427,242. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. WINSLOW, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Binders for Leaves, of which improvements the following is a specification.

The invention described herein relates to certain improvements in means for temporarily securing loose leaves together, and has for its object a construction whereby the leaves may be easily and securely fastened together for use in the same manner as the leaves of a book and readily removed when desired.

In general terms, the invention consists in the construction and combination substantially as hereinafter more fully described and specifically claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of one end of my improved binder. Figs. 2, 3, and 4 are perspective views of the turning-plate, the locking-piece, and prong, respectively. Fig. 5 is a plan view of the binder, showing the position of the parts for inserting the leaves. Fig. 6 is a side elevation of the same, showing the manner of securing the binder to the back of the inclosing boards. Fig. 7 is a perspective view of a modified form of the binder. Fig. 8 is a plan view of another form. Fig. 9 is a bottom plan of the construction shown in Fig. 8, and Fig. 10 is a transverse section of the same.

In the practice of my invention the back or foundation plate 1 is made of a strip of metal, of a width proportional to the combined thickness of the largest number of leaves which it may be desirable to bind together and of length a little greater than that of the leaves. The ends of this strip are T-shaped and are turned up and the arms of the T bent around to form a guard or protector 2 for the ends of the leaves. Swinging plates 3 are pivoted on the plate 1—one near each end thereof—and on opposite edges of the plates are formed side pieces 4, which preferably extend from the ends of the plates toward the middle thereof, the distance between the inner ends of the side pieces being approximately equal to the combined thickness of the leaves to be bound. To these side pieces

are attached the prongs 5 and supporting-guard 6, which may be made detachable from the side pieces, as shown in Figs. 1 to 6, inclusive, or integral therewith, as shown in Figs. 7 to 10.

In the construction shown in Figs. 1 to 6 the combined prong and guard are provided with legs 7, having feet 8 at their lower ends, as clearly shown in Figs. 1 and 4. In attaching these parts the legs straddle the side pieces, and by turning the combined prong and guard a quarter of a revolution into the position shown in Fig. 1 the feet 8 pass under the side pieces from opposite sides, portions of the plate 3 being cut away, so as to permit the passage of the feet under the side piece, thereby locking the prong and guard to the side pieces, the prong projecting at right angles to the side pieces, and the guard lying on and parallel therewith.

As shown in Figs. 1 and 2, the side pieces are slightly bent transversely, so as to form shoulders *a* on both sides thereof, said shoulders preventing the longitudinal movement of the prong and guard, so that the legs pass on opposite sides thereof, as shown.

When it is desired to apply the binder, the swinging plates 3 are turned, as shown in Fig. 5, at right angles to the back or foundation plate 1. The leaves, having suitable holes punched therein for the reception of the prongs 5, are then placed parallel with the back plate between the inner ends of the side pieces 4, as indicated by dotted lines in Fig. 5. The swinging plates are then turned around parallel with the back plate, thereby forcing the prongs through the leaves, which are held as against lateral movement by the stops 9. The stops are formed on the back plate 1 and are so located as to be alongside of the prongs, or approximately so, when the latter are in normal position. It will be observed that the stops 9 not only serve to hold the leaves while pressing the prongs through them, but also serve to prevent the leaves from slipping off the prongs. If desired, the ends of the prongs may be pointed, so that they will pass through the leaves, forming their own holes therethrough.

In order to provide an additional security as against the slipping off of the leaves, arms 10, provided with heads 11, are so pivoted to

the side pieces that when turned down to the position shown in Figs. 1 and 6 the heads 11 will bear against the leaves on the side of the prongs opposite the stops 9. It will be observed by reference to Figs. 1 and 6 that the heads 11 are so constructed that when the heads are turned down their upper edges will form practically a continuation of the upper edges of the guards 6 and stops 9. The heads 11 are provided with projections 12, which pass through slots 13 and 14 in the swinging and back plates when the former is turned to normal position, as shown in Figs. 1 and 6, thereby locking the swinging plate as against accidental displacement. When it is desired to turn the plate 3 into the position shown in Fig. 5, the pivoted lock 11 is turned back until the arm 10 is at right angles to the upper edge of the side piece 4. It will be observed that when the head 11 is turned down to the position shown in Figs. 1 and 6 it closes the gap between the inner ends of the side pieces, and will therefore by reason of its bearing against the leaves held in the binder prevent any turning of the plate 3, so that, if desired, the projection 12 in the head may be omitted.

In order to attach the binder between suitable covers, loops 15 are attached to the under side of the back plate for the reception of a tape 16, attached to the covers. If desired, supports 17 for the leaves may be formed on the back or foundation plate between the swinging plates 3, and said supports may be slotted for tapes to secure the binder between covers, as shown in Fig. 6.

In Fig. 7 the guards and prongs 5 are shown integral with the side pieces 4 of the swinging plates. The locks for holding the leaves on the prongs consist of arms 18, pivotally mounted on the swinging plates and adapted to be turned up alongside of the leaves and holding the same on the prongs. Notches 19 are formed in the ends of the prongs into which the arms spring, thereby holding the latter in locking position. The operation of this form of binder is similar to that described in connection with the construction shown in Figs. 1 to 6.

In Figs. 8 to 10 is illustrated a further modification of my improvement, wherein the movable plate 3 is made in two sections or parts, consisting of angular pieces of metal having the prongs 5 attached to their vertical sides 4, and the horizontal side adapted to slide one over the other when inserting or removing the prongs. The plates are held together by means of an oval spring 21, engaging lugs 22 on the under sides of the plates. At the ends of its shortest diameter the spring 21 is provided with notches 23 to receive the lugs, thereby holding the spring as against accidental displacement. By turn-

ing the spring so that when its longest diameter is in line with the lugs the plates may be separated the desired distance and the leaves placed in position. Then by turning the spring the plates will be drawn together.

It is characteristic of the several forms or modifications shown and described herein and of other forms which would readily suggest themselves to the skilled mechanic without departing from the spirit of my invention that the prongs are inserted and removed from the leaves by a lateral movement of the movable plate.

It will readily be understood that as the prongs 5 on the plate project inward from the opposite edge of the plate and overlap the leaves will be held onto the prongs by the side pieces, if the plate 3 be locked as against lateral movement with reference to the leaves.

I claim herein as my invention—

1. A binder for leaves, consisting of a laterally-movable plate provided with side pieces having inwardly-projecting prongs attached thereto and adapted to be pushed through the leaves by a lateral movement of the plate, substantially as set forth.

2. A binder for leaves, having, in combination, a base or foundation plate, a plate movably-connected thereto and provided with side pieces having inwardly-projecting prongs attached thereto, substantially as set forth.

3. A binder for leaves, having, in combination, a movable plate provided with side pieces having inwardly-projecting prongs attached thereto and a lock for holding the leaves upon the prongs, substantially as set forth.

4. A binder for leaves, having, in combination, a base or foundation plate, a plate pivoted thereon and provided with vertical sides on opposite edges, and prongs detachably connected to said sides, substantially as set forth.

5. A binder for leaves, having, in combination, a base or foundation plate provided with guards along its edges, a plate pivotally mounted on the base-plate and provided with vertical sides, inwardly-projecting prongs attached to the sides, and locks for holding the leaves on the prongs and locking the movable plate parallel with the base-plate, substantially as set forth.

6. In a binder for leaves, the combination of a base or foundation plate, a plate movably connected to the base or foundation plate and provided with side pieces having inwardly-projecting prongs, and a locking device for holding the movable plate parallel with the base-plate, substantially as set forth.

In testimony whereof I have hereunto set my hand.

GEORGE H. WINSLOW.

Witnesses:

DARWIN S. WOLCOTT,
W. B. CORWIN.