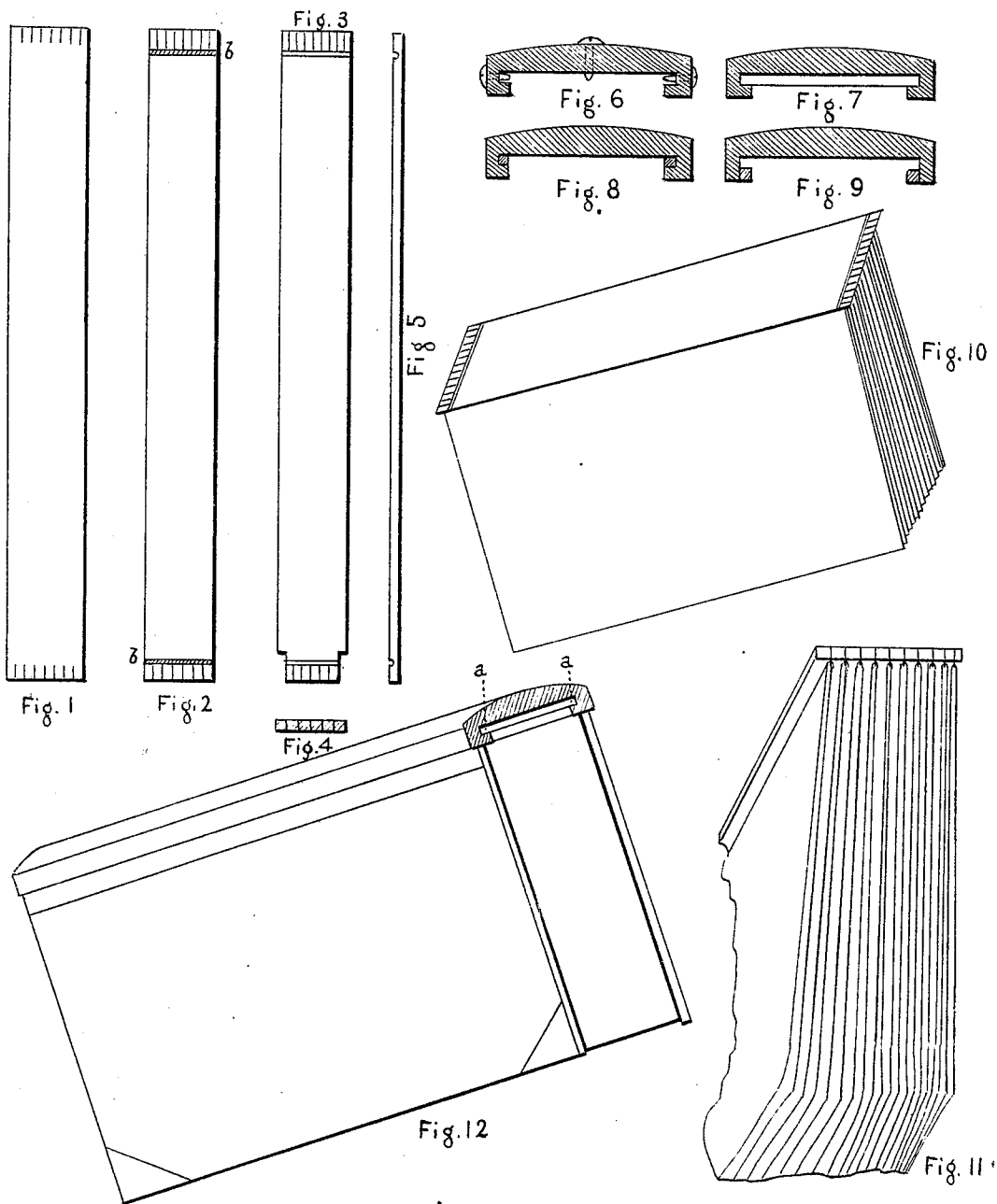


W. H. WAHL & J. SMITH.

BOOK-BINDING.

No. 182,873.

Patented Oct. 3, 1976.



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UNITED STATES PATENT OFFICE.

WILLIAM H. WAHL, OF PHILADELPHIA, PENNSYLVANIA, AND JULIUS SMITH, OF HADDONFIELD, NEW JERSEY.

IMPROVEMENT IN BOOK-BINDING.

Specification forming part of Letters Patent No. **182,873**, dated October 3, 1876; application filed April 17, 1876.

To all whom it may concern:

Be it known that we, WILLIAM H. WAHL, of the city and county of Philadelphia, and State of Pennsylvania, and JULIUS SMITH, of Haddonfield, in the county of Camden, and State of New Jersey, have jointly invented certain new and useful devices for binding, filing, and preserving newspapers, periodicals, pamphlets, music-sheets, documents of various kinds, and the like; and we do hereby declare the following to be a full and exact description of the devices in question.

For the above-mentioned purpose we employ a slat of wood, metal, or other suitable material, which slat is provided above and below, Figures 1 to 3, with teeth or notches, the number of which teeth or notches will depend upon the number of periodicals, &c., which the same is designed to contain.

In connection with this slat we employ a cover, Fig. 12, which corresponds both in appearance and purpose with the ordinary book-binding. On the inside of this cover, where the leaves forming the sides and the back unite, there is provided on each side a groove, for the purpose of receiving the aforesaid slat, which may thus be slid, with its periodicals, pamphlets, &c., attached in the manner about to be described, inside of the cover. This groove is shown at *a*, Fig. 12. It is not necessary that this groove should be continuous throughout its entire extent, for, as its purpose is simply to guide the slat with its attached periodicals, &c., to its proper place within the cover-back, and to hold it in place, it is obvious that this purpose will be served quite as well if the groove is made discontinuous by the removal of parts of it at intervals; or the groove may be substituted by the attachment to each side of the cover-back of several guiding-pieces, sufficient in number to retain the slat and its attached periodicals, &c., in place within the cover. Such attached guides or guiding-pieces are shown in Fig. 9.

To still further aid in retaining the slat with its attached periodicals, &c., properly within the cover, we provide a stop, against which the slat, in its descent into the grooves or

guides of the cover-back, must strike, and which stop prevents the slat from descending below the desired point.

For this stop, a number of familiar mechanical artifices may be employed, several of which are herewith shown, to wit: Fig. 3 shows a step or shoulder upon the lower portion of the slat, which engages with a corresponding shoulder at the lower termination of aforesaid grooves or lowest set of guiding-pieces. (See Fig. 8.) Fig. 7 shows a strip or cross-piece at the base of the back of cover, to prevent the further descent of the slat. Fig. 6 shows several pins employed for the same purpose.

For the cover and slat any of the materials used by book-binders may be employed, though for our purpose it is preferable that the slat and the back with its grooves or guiding-pieces should be made of some rigid material, like wood or metal.

The mode of using our invention is as follows: The periodical, music-sheet, &c., to be bound is laid open in the middle of the series of sheets, and is attached to the slat by passing a thread or fine wire, suitably engaged with one or more notches at one end of the slat, along the middle line of the opened sheets, and fastening the thread or wire at the other end of the slat by taking a turn around several of the notches at that end. The slat is then returned within the cover, and when a fresh addition is to be made to the slat it is slid out, the newspaper, music-sheet, or whatever it may be, is attached, as before described, and the slat again returned within the cover; and this operation is repeated as often as may be found necessary to complete a volume or to fill the frame, when the result will be a substantially-bound book.

Fig. 10 shows a slat filled in the manner described and ready to be inserted within the cover, Fig. 12. Fig. 11 is a top view of Fig. 10.

In order that the thread or wire employed for attaching the sheets shall not project beyond the back surface of the slat, and thus interfere with its entrance into the cover, we have found it advisable to cut a groove di-

rectly across the back of the slat, at both ends of the same, at the base of each row of notches, which artifice brings the threads or wires used for attaching the sheets no more than flush with the back surface of the slat. Fig. 3 affords a front and side view of this groove.

We have also found it desirable, for the purpose of securing the bound sheets at exactly the same level, as well as to save the cutting of the sheets by the attaching thread or wire, to attach a strip of wood, or wire, or other suitable material, across the upper and lower portions of the slat, and on its inner face, at such a distance apart as just to admit the sheets. This is shown in the drawings at *b*, Fig. 2.

Having now given a full description of the construction and mode of using our device, we claim as our invention and desire to secure by Letters Patent—

1. The detachable cover-back having a groove constructed as described, and provided with stop devices, as and for the purpose set forth.

2. The notched or toothed slat, provided with a step or shoulder of the construction, and for the purpose hereinbefore described.

3. The notched or toothed slat, provided with the grooves at the base of the rows of teeth, for the purpose herein set forth.

4. The combination of the detachable cover-back, having a groove or guiding-pieces and stop devices, constructed as described, with a toothed or notched slat and attaching threads or wires, in the manner and for the purpose hereinbefore described.

WILLIAM H. WAHL.

JULIUS SMITH.

Witnesses:

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