W. BYRNE.

Temporary Binder.

No. 210,991. Patented Dec. 17, 1878.

Fig., 2.

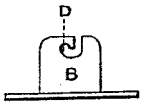


Fig., 1.

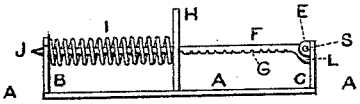


Fig., 3.

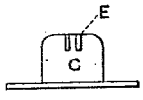


Fig., 4.

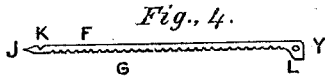


Fig., 5

Fig., 6.

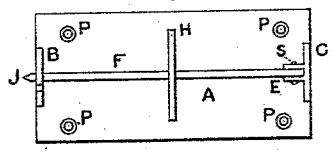


Fig., 7.

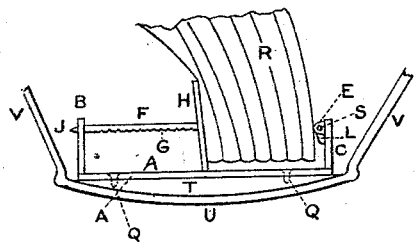
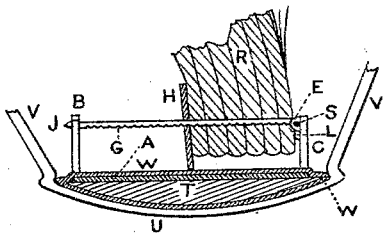


Fig., 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM BYRNE, OF AUBURN, NEW YORK, ASSIGNOR TO HENRY O'NIEL AND O. M. GODDARD, OF SAME PLACE, ONE-THIRD TO EACH.

IMPROVEMENT IN TEMPORARY BINDERS.

Specification forming part of Letters Patent No. **210,991**, dated December 17, 1878; application filed August 16, 1878.

To all whom it may concern:

Be it known that I, WILLIAM BYRNE, of the city of Auburn, in the county of Cayuga and State of New York, have invented a new and useful Self-Acting Binder or File for Pamphlets, Papers, &c., which invention is fully set forth in the following specification, reference being had to the accompanying drawings, and in which—

Figure 1 is a side view of my invention; Fig. 2, an outside end view of the same, showing the catch-notch. Fig. 3 is an inside end view of Fig. 1, showing the needle-joint flanges. Fig. 4 is a view of the needle. Fig. 5 is a plan view of the washer. Fig. 6 is a plan view of the metallic plate, and Figs. 7 and 8 are views of my invention with files attached.

The object of my invention is to afford an easy and substantial method for preserving pamphlets, papers, &c., without resort to the ordinary method of book-binding, but possessing all the practical advantages thereof.

To accomplish this object, I construct a metallic plate, A, Figs. 1, 2, 3, 6, from which piece a central section at either end is bent up at right angles thereto, as seen at B and C, Figs. 1, 2, 3, 6, 7, and 8. One of these angle-sections, B, is provided with a latch-slot, as seen in Fig. 2 at D. The other angle-section, C, is provided with a hinge-joint or ears, as shown at E in Fig. 3.

I next construct a binding pin or wire of the required length, as shown in Fig. 4. This pin F is provided with a point, J, a nick or notch, K, at one end, a hole, Y, and a projection or heel, L, at the other. On its under side is a series of notches or serrations, as shown at G. The serrations on the needles act in the manner of barbs upon the files, thus preventing their shifting backward and forward. They also act in the same manner against the edge of the hole in the washer H. I now provide a washer, Fig. 5, H, with a hole, M, and from its circumference clip a section in a straight line, as seen at N. I also make use of a spiral spring when needed, the function of which will be presently set forth.

To effect the substantial operation of my invention, I adjust the needle F in its place upon the angle C, and secure its heel end thereto, in the manner of a joint, by means of the joint rivet or wire S, Figs. 6, 7, and 8. I now secure two or more of these plates A, provided with their binding-needles F, to a back, T, Fig. 7, of wood or binders' board, by means of screws or rivets Q, as shown in Fig. 7. The back T being fastened to ordinary binding flaps or covers V and back U, in the usual manner, my invention is ready for use.

For papers, bills, &c., the point of the needle or pin is forced through at a distance from their edges not exceeding that of the needle from the plate when in a horizontal position; but for heavier matter, such as pamphlets and magazines, I find it necessary to use an awl or punch, thereby making a perforation for the binding-needle to pass through. As the files are pushed on the needles the washer H is pushed on after them, and its straight section N impinging against the surface of the plate A, and a portion of its hole M acting in the same manner against the serrated edge G of the needle F, the files are kept in close contact with each other until the binding-needle is completely filled. When necessary to increase the aforementioned contact of the files during the filling of the volume, I follow the adjustment of the washer by a spiral spring, I, one end bearing against the washer and the other against the angle-section B, as shown in Fig. 1.

The point or end of the needle is sprung into the slot D of the angle-piece B, the notch K accommodating itself thereto, the action of the heel L against the angle-section C serving to keep needles F sprung up, and preventing any unlocking or releasing of the notched end from the slotted angle-piece. To add files, it is only necessary to unlock the needle F by pressing it down and then out of the slot D, remove the spring and washer, adjust the files, as described, replace the washer, then the spring, if needed, and latch or hook the end of needles F, as already set forth, and the operation is complete.

What I consider to be new, and desire to secure by Letters Patent, is the following:

1. The combination of the serrated needle F with the spiral spring I and the mutilated washer H, operating as described and set forth.

2. The temporary binder consisting of the covers V V, backs U T, plate A, having the flanges B C, hinged needle F, notched and serrated, as described, and the mutilated washer H, substantially as set forth.

WM. BYRNE.

Witnesses:
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