(No Model.)

S. B. DUNN.

TEMPORARY BINDER.

No. 330,967. Patented Nov. 24, 1885.

Fig. 1.

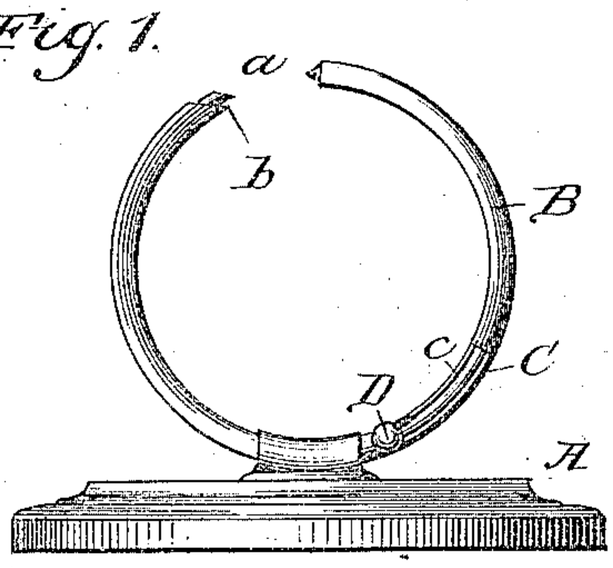


Fig. 2.

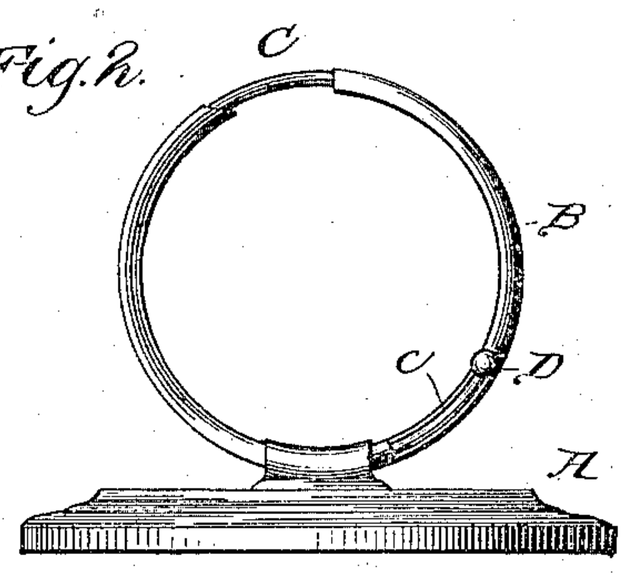


Fig. 3.

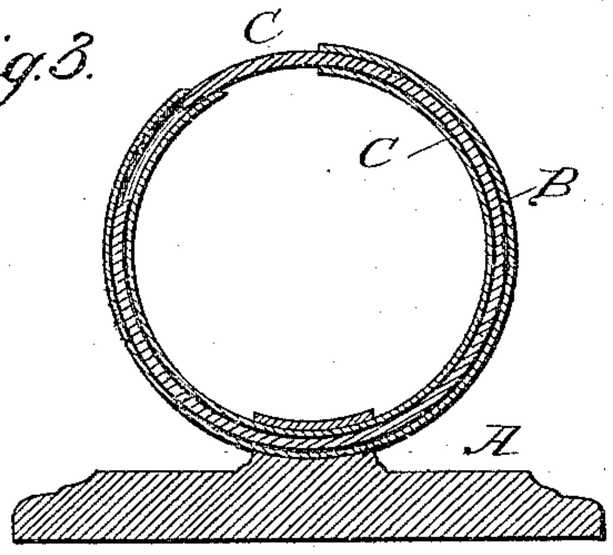


Fig. 4.

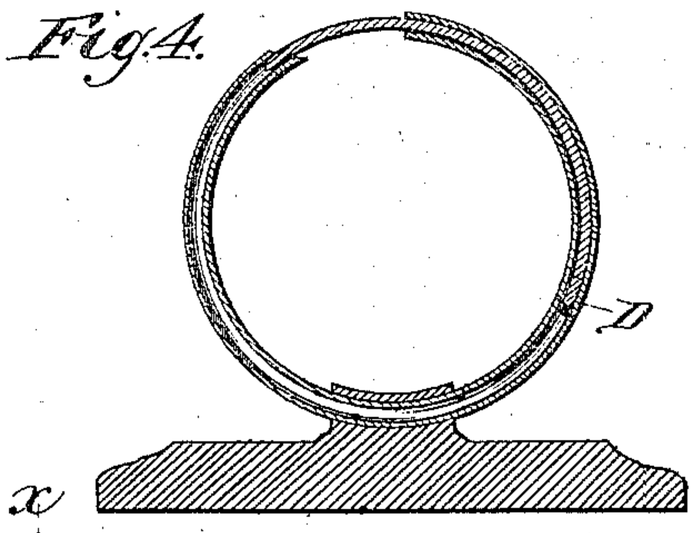


Fig. 5.

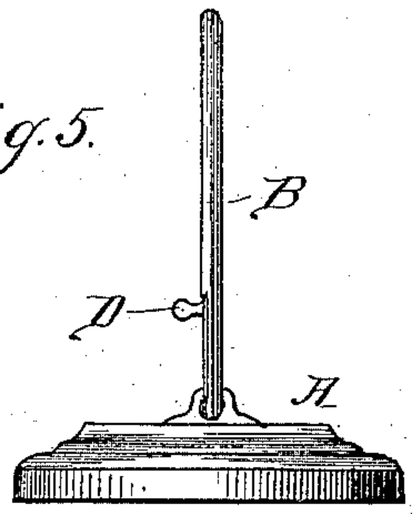


Fig. 6.

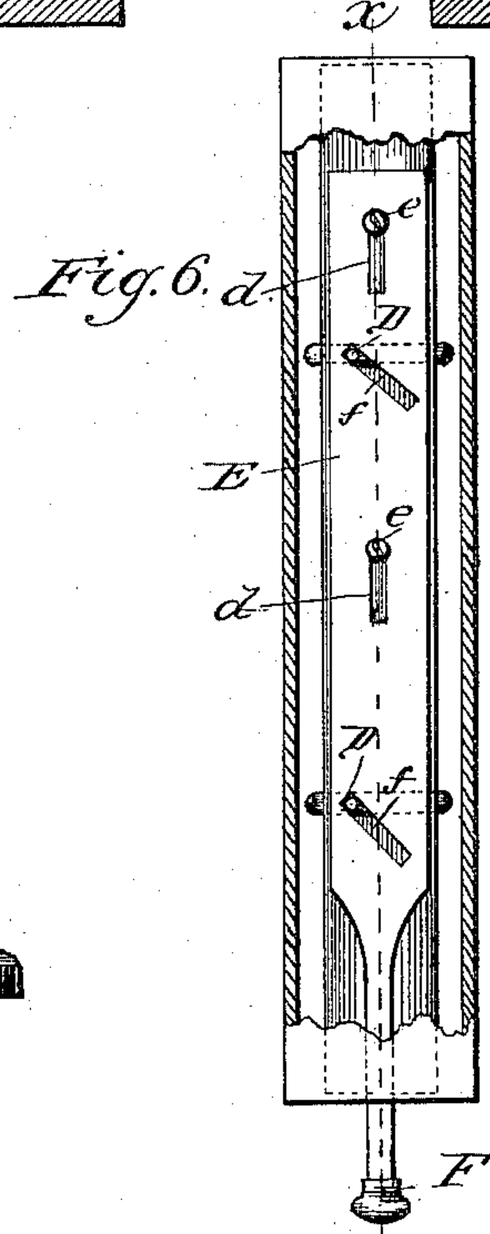
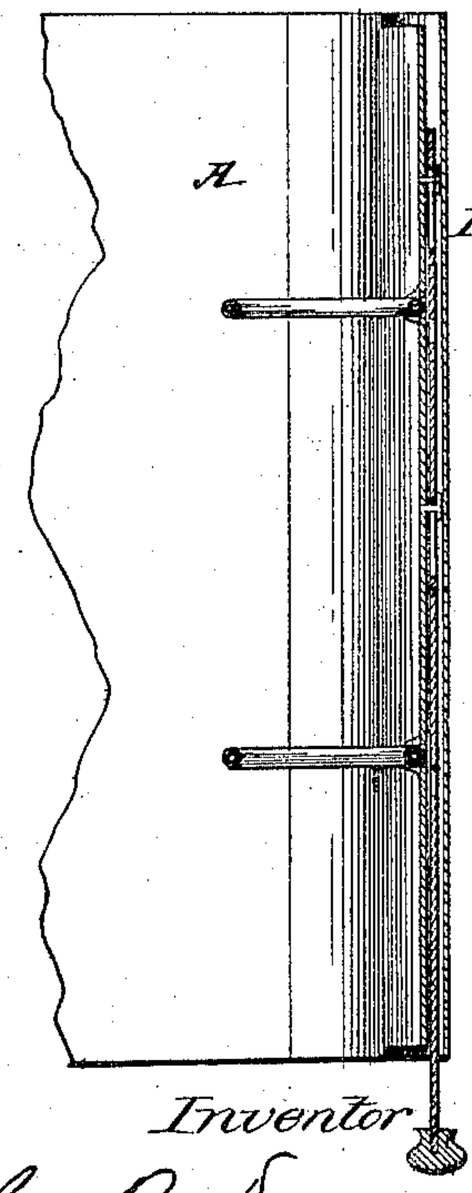


Fig. 7.



Witnesses.
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UNITED STATES PATENT OFFICE.

SOLA B. DUNN, OF CHICAGO, ILLINOIS.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 330,967, dated November 24, 1885.

Application filed February 2, 1885. Serial No. 154,752. (No model.)

To all whom it may concern:

Be it known that I, SOLA B. DUNN, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Temporary Binders, of which the following is a specification.

This invention relates to improvements in that class of temporary binders in which the tubular puncturing and open end or ends of the binder proper is closed or opened by a movable wire connection between said ends so that when it is desirable to remove any particular paper or sheet said papers may be shifted over upon or beyond the uniting-wire until the paper to be removed is adjacent the open end of the binder and in position to be removed after shifting the wire so as to uncover the opening.

The objects of this invention are to dispense with spring and hinge connections in the class of binders above set forth, and to avoid angular and other irregular corners and joints, which are unsightly and liable to catch upon and disfigure papers, and at the same time have a binder of the greatest strength and rigidity consistent with the weight and bulk of metal employed. I attain these objects by devices illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a temporary binder embodying my invention with the binder open for the attachment of papers; Fig. 2, a similar view with the binder closed; Fig. 3, a section of the same with the binder closed; Fig. 4, a similar view showing the connecting-wire foreshortened; Fig. 5, a front elevation of the same; Fig. 6, an end elevation, partly in section, of my binder in duplex form, and means for a simultaneous and uniform operation of the same, which duplex binder is especially adapted for sheets of music or other similar and large sheets; Fig. 7, a sectional plan view on the line *x x* of Fig. 6.

Similar letters of reference indicate the same parts in the several figures of the drawings.

Rigidly secured in a perforated lug or by soldering on a base, A, which may be a weight, as shown in Figs. 1 to 5, inclusive, or a backing-board, as shown in Figs. 6 and 7, are one or more tubes, B, in the form of a ring, which is opened on the upper side, as shown at *a*, and preferably has one of its opposing ends pointed, as at *b*, to facilitate the perforation of the papers to be bound. Movable in the ring B is a wire, C, of substantially the same shape as the tubular ring, and actuated by means of a knob, D, secured to the wire and working in an elongated slot, *c*, formed in one side of the tubular ring. This wire, which may be shifted in the ring so as to close the opening thereof, need be only of a length to form a semicircle; but in practice it is preferred to have it form substantially as much of a circle as the ring, because it will thereby increase the stiffness of the ring. When it is desirable to bind papers of any kind, the wire is moved to open the tubular ring-holder B by taking hold of the button D, and pushing it along the slot *c*, and after the papers are inserted by passing them over the point *b* of the holder. This movement of the knob or button is reversed until the opening of the holder is closed, and preferably until the wire C has entered the opposite end of the holder, in which position the resistance of the wire to lateral strains is materially increased. When two or more of the binders are used, the shanks of the knobs may be connected (see Figs. 6 and 7) by a bar, E, projecting from one side of the base to form a handle, F, which bar or slide is provided with longitudinal elongated slots *d*, through which headed screws *e* pass into the end of the base for securing the bar in place and permitting its reciprocation on the base. The connection between the binders is made by the engagement of oblique slots *f* in the bar with the shanks of the knobs D or other projections suitable for that purpose. By this arrangement, if the bar be pushed inwardly from the position shown, the oblique slots will force the projections D to the right in Fig. 6, thereby actuating the connecting-wire C and opening and closing the holder of the binder, as the case may be.

More than two of the binders may be simultaneously actuated in the same manner, and the opening and closing of the holder thereof be correspondingly facilitated, and by this means I am enabled to practically apply a temporary binder to sheet-music or other similar supporting-bases, or in cases where it is

desirable that the sheet or sheets should be held at more than one point.

The circular form of this binder recommends it not only because of its strength, rigidity, and durability, but because angular corners, hinge and spring connections are avoided, and at the same time the binder presents to the eye a pleasing configuration.

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

1. The combination, with a suitable base-support and a circular tubular holder rigid on said base-support, open at one side, of a correspondingly-curved connecting-wire slidable in said holder to close the opening thereof, substantially as described.

2. The circular tubular and fixed holder open at one side only and provided with an elongated slot, in combination with a correspondingly-curved connecting-wire movable therein, and a knob on said wire projecting outwardly through the slot of the holder, substantially as described.

3. The combination, with the tubular holder having the elongated slot, the movable wire in said holder, and the stud or button on the wire, of a slidable bar provided with oblique slots engaging said stud, substantially as described.

SOLA B. DUNN.

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