No. 755,002. PATENTED MAR. 22, 1904.

E. HERRMANN.

BINDER.

APPLICATION FILED NOV. 24, 1902.

NO MODEL.

Fig. 1

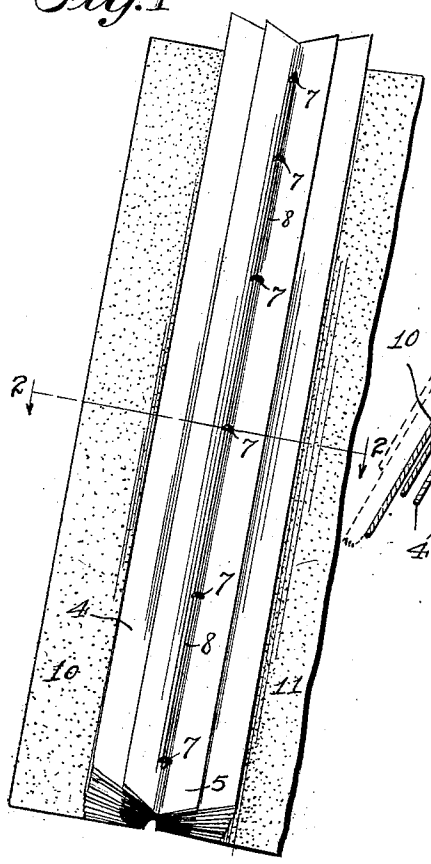


Fig. 2

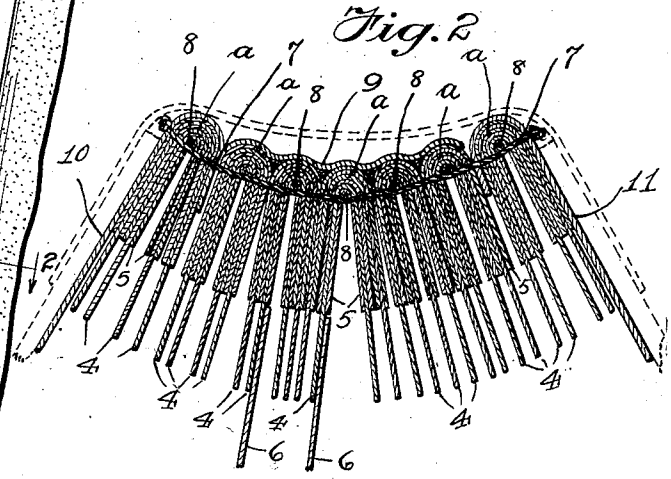
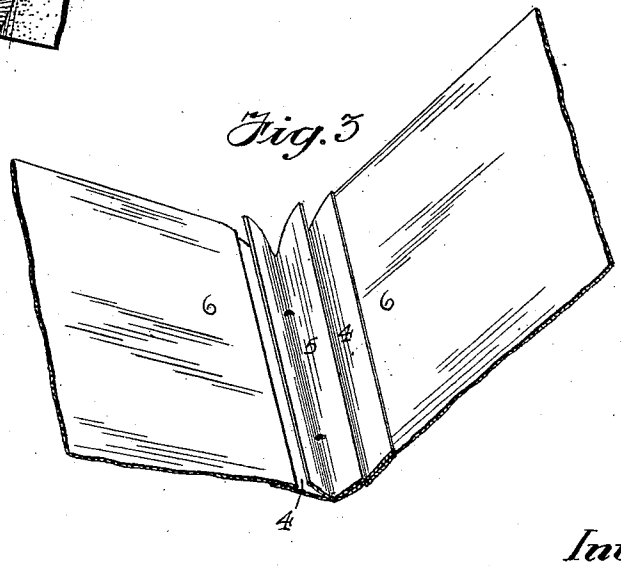


Fig. 3



Witnesses:

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No. 755,002. Patented March 22, 1904.

UNITED STATES PATENT OFFICE.

EMIL HERRMANN, OF DOWNERS GROVE, ILLINOIS.

BINDER.

SPECIFICATION forming part of Letters Patent No. 755,002, dated March 22, 1904.

Application filed November 24, 1902. Serial No. 132,665. (No model.)

To all whom it may concern:

Be it known that I, EMIL HERRMANN, a citizen of the United States, residing at Downers Grove, in the county of Dupage and State of Illinois, have invented certain new and useful Improvements in Binders, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to binders, and has for its object to provide a binder especially adapted for use in binding sheet-music together. In a binder of this class it is desirable that means be provided for the ready insertion of the sheets to be bound, that adequate compensation be made for the thickness of the sheets introduced, and that the binding be of such character as to permit the bound sheets to lie flat when opened. These advantages are all secured in my improved binder.

A further object of my improved construction is that provision is made for the ready attachment of covers.

In the accompanying drawings, Figure 1 is a perspective view. Fig. 2 is an enlarged cross-section on line 2 2 of Fig. 1, and Fig. 3 is a partial perspective view illustrating the manner of attaching the sheets.

Referring to the drawings for a detailed description of my improvements, 4 indicates a series of binder-strips to which the sheets to be bound are secured, and 5 a series of separate intermediate strips, two of which lie between each pair of binder-strips. The faces of the intermediate strips are not, however, directly secured to the faces of the binder-strips. As shown in Fig. 2, the intermediate strips are considerably narrower than the binder-strips, the latter projecting a sufficient distance beyond the intermediate strips to provide a surface of sufficient extent to properly secure the sheets to be attached. The projecting portions of the binder-strips 4 are gummed, preferably on one side, so that by moistening them the sheets to be bound may be readily secured to them. The sheets to be bound are represented by 6 in Fig. 2, and from an inspection of said figure it will be seen that the intermediate strips 5 compensate for the thickness of the sheets to be bound, so that when the binder is filled it suffers no undue strain. In order to make the bound sheets lie flat when opened, I arrange the binder-strips and the intermediate strips in groups or bunches *a*, as best shown in Fig. 2. Each bunch is made up of a plurality of superposed sheets or strips of suitable flat material, one-third the number of sheets or strips being of greater width than the other two-thirds. The sheets or strips of material are placed together in such a manner that one of the shorter sheets or strips is at the bottom and top of the pile and the ends of the longer sheets or strips project beyond the ends of the shorter sheets or strips. These sheets or strips are then folded longitudinally along a central line, so that the folded parts form the binder and intermediate strips in the manner shown in Fig. 2. A number of such bunches are bound together by transverse binding-cords 7, which pass through them near the fold, longitudinal cords 8 being provided in each fold to further secure the strips in place. The ends of the cords 8 are secured to the transverse cords 7, which lie nearest the upper and lower ends of the binder. By thus forming the binder-strips in small bunches and connecting them loosely together in the manner described the bound sheets when opened will lie flat, making the binder particularly suitable for sheet-music.

9 indicates a strip of muslin or other suitable fabric which is preferably placed across the back of the binder to protect the folded portions of the strips. The muslin 9 is preferably secured in place by the use of glue.

In order to provide for securing the binder permanently between suitable covers, I provide attaching-strips 10 11, of cloth or other suitable material, adjacent to the outermost binder-strips, as shown in Fig. 2, which strips of cloth are bound up with the binding-strips in the manner shown. When it is desired to provide the binder with covers, the outer surfaces of the cloth strips 10 11 are pasted to the covers adjacent to the hinge thereof, as indicated by dotted lines in Fig. 2. In this manner a permanent bound volume may be secured.

While my improved binder is especially de-

signed for use for binding together sheet-music, it may be used for any other purpose to which it is adapted.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. A binder comprising a plurality of binder-strips and separate intermediate strips, said binder-strips being of greater width than said intermediate strips so as to project beyond the ends of said latter strips, and means extending transversely and longitudinally of the said binder-strips and intermediate strips for loosely connecting the said binder-strips and intermediate strips together.

2. A binder comprising a plurality of binder-strips and separate intermediate strips, said binder-strips being of greater width than said intermediate strips so as to project beyond the ends of said latter strips, means extending transversely and longitudinally of the said binder-strips and intermediate strips for loosely connecting said binder-strips and intermediate strips together, and attaching-strips secured to said binder at opposite sides thereof for attaching covers thereto.

3. A binder comprising a plurality of sheets of flat material of different widths folded upon a central line and adapted to form binder-strips and intermediate strips, said binder-strips extending beyond the ends of said intermediate strips, and means for loosely connecting the said binder-strips and intermediate strips together.

4. A binder comprising a plurality of sheets of flat material of different widths folded upon a central line and adapted to form binder-strips and intermediate strips, said binder-strips extending beyond the ends of said intermediate strips, means for loosely connecting the said binder-strips and intermediate strips together, and attaching-strips secured to said binder at opposite sides thereof for attaching covers thereto.

5. A binder comprising a plurality of sheets of flat material of different widths folded upon a central line and adapted to form binder-strips and intermediate strips, said binder-strips extending beyond the ends of said intermediate strips, means for loosely connecting said binder-strips and intermediate strips together, attaching-strips secured to said binder at opposite sides thereof for attaching covers thereto, and an adhesive substance upon said projecting portions of said binder-strips.

6. A binder comprising a plurality of strips folded together to form binder-strips and intermediate strips, said intermediate strips lying between the binder-strips, and means connecting said binder-strips and intermediate strips together so that they may turn independently of each other, substantially as described.

7. A binder comprising a plurality of sheets of flat material of different widths folded together and adapted to form binder-strips and intermediate strips, said binder-strips extending beyond said intermediate strips, and means connecting said binder-strips and intermediate strips together so that they may turn independently of each other, substantially as described.

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