(No Model.)

T. C. DAMBORG.

SHEET MUSIC.

No. 260,372. Patented July 4, 1882.

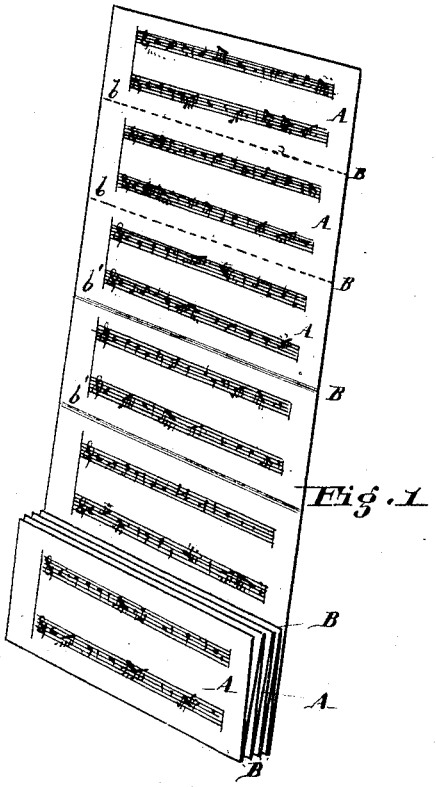

Fig. 1

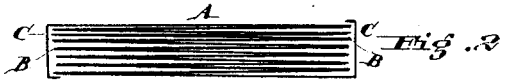

Fig. 2

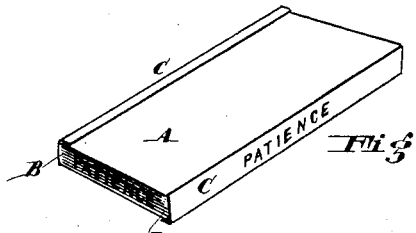

Fig. 3

Fig. 5

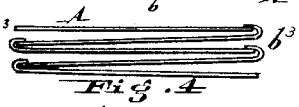

Fig. 4

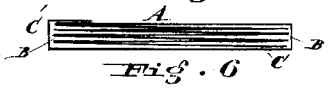

Fig. 6

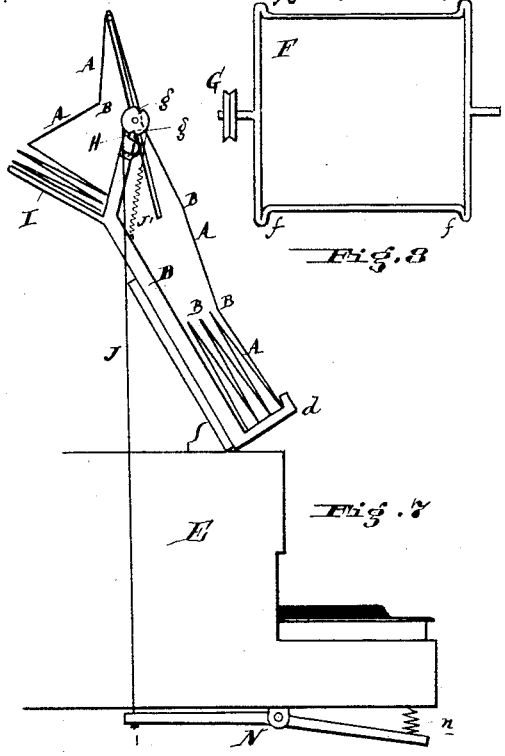

Fig. 7

Fig. 8

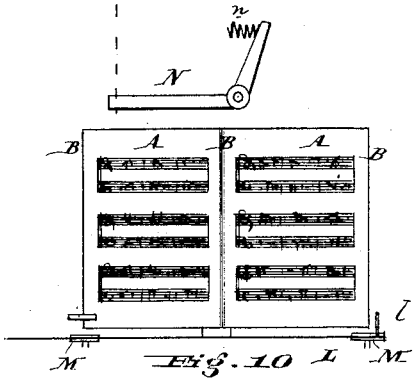

Fig. 10

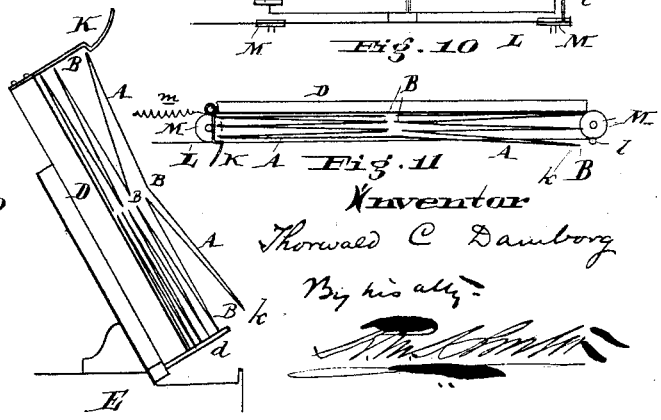

Fig. 9

Fig. 11

Witnesses

Inventor

Thorwald C Damborg

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N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THORWALD C. DAMBORG, OF PHILADELPHIA, PENNSYLVANIA.

SHEET-MUSIC.

SPECIFICATION forming part of Letters Patent No. 260,372, dated July 4, 1882.

Application filed April 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, THORWALD C. DAMBORG, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Sheet-Music, of which the following is a specification.

My invention has reference to sheet-music; and it consists in forming sheet-music into a continuous web, and in creasing the said web and folding it back and forth in alternately opposite directions; further, in providing said web with inclosing pieces or covers formed thereon, and which, when the web is folded, lap over and cover the creased or folded edges of the same; further, in combining music formed in the web substantially as specified above with mechanism adapted to a piano or other musical instrument or music-stand to properly turn or fold said music by the simple movement of a pedal or its equivalent, and in minor details, all of which are fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The main object of this invention is to overcome the present inconvenient manner of turning sheet-music while the musician is playing, and also to form the music in such a manner that it can be easily handled and carried.

In the drawings, Figure 1 is a perspective view of sheet-music printed in the web, embodying my invention. Fig. 2 is an end view of same folded up. Fig. 3 is a perspective view of same in the folded condition, and showing the manner of placing the title on same. Figs. 4 and 5 show two methods of making the creases or folds in said printed web. Fig. 6 is a modification of the manner of covering the web when folded. Fig. 7 is a side elevation of mechanism applied to a piano by which said printed web is automatically turned over. Fig. 8 is a front elevation of the turning-frame. Fig. 9 is a side elevation of a holder for my improved music in the web, and as adapted to use on the piano or otherwise. Figs. 10 and 11 are respectively front elevation and plan of automatic mechanism to turn my improved web-music when the staves are printed longitudinally upon the web.

A represents a series of sheets of music, joined together at B to form a continuous web, as shown.

If desired, the entire web may be printed in one sheet and afterward creased by punctures, as shown at *b*, or by simply creasing it, as shown at *b'*, and sheets A are folded backward and forward upon each other in alternately opposite directions.

The staves may be printed parallel with the creases or bends B, as shown in Fig. 1, or across said sheets at right angles to said creases or bends, as shown in Fig. 10. In the former case the width of the sheet A between any two creases may be small, so as to enable the music to be carried in the pocket, while in the latter case the sheets must be sufficiently wide between any two creases to take in the full length of the staves, which usually comprise several bars in length, and the music must in all cases be spaced so that no crease or fold occurs in any of the printed matter.

The covers may consist in extending the ends of the two extreme sheets A so as to wrap over or inclose the creases or bends B, as shown at C in Fig. 2, or one end of the web may be extended so as to wrap entirely around the printed music when folded, as shown at C C' in Fig. 6.

If desired, the sheets A may be made separate and joined together at B by cloth strips b^2, as shown in Fig. 5, or the ends may be pasted together after being creased, as shown in Fig. 4.

To use this music upon a piano or other musical instrument or music-stand I provide mechanism which consists as follows:

To a frame, D, I hinge or support at the top a wire frame, F, adapted to rotate, and provided with projections *f f*, to prevent the music from slipping off the same while being turned. To the axis of this frame I secure a pulley, G, provided with notches *g* on diametrically-opposite sides thereof, and over this pulley I pass a cord, J, one end of which is secured to a spring, J', and the other end to a lever or pedal, N, which is actuated by the foot or knee and is kept in actuating position by the spring *n*. A spring catch or dog, H, presses upon the periphery of the pulley G, and locks the frame F in proper position by catching in the notches *g*.

At the back of the frame D is a table or support, I, and at the foot of said frame D is a support, *d*, for the music. The end of the

web is placed over the frame F, exposing several sheets, A, as shown in Fig. 7. When the performer has played all the music down to the last sheet exposed the lever N is actuated, causing the frame F to make a semi-revolution, which action exposes two fresh sheets A of the music-web. By this it is seen that it is not necessary to play the last bars, or even staves, before bringing into view fresh sheets of music. Consequently there is no inconvenience or delay due to turning over sheets of music in the use of my improved web-music printed in the manner herein described. As the sheets A are turned over by the frame F they automatically fold upon the table I, as shown, so that after playing all the music printed on one side of the web the performer may reverse the same and go through the same operation, playing from the music printed on the other side of the web.

If the staves are printed longitudinally with the web, the sheets may be turned by a cord, L, provided with an upright pin, *l*, said cord passing around pulleys M, and having one end secured to a spring, *m*. In this case the sheet-music is laid upon the frame D, and by pulling the cord L by means actuated by the foot or knee the pin *l* is drawn back of the projecting edge *k* and turns the double sheet over and locks it back of a spring-catch, K, and the pin is then allowed to return to its normal position. When one bend B is pressed back of the catch K the tension of the front page will cause the next bend to spring out, as shown at *k*, to allow the pin *l* to pass behind it.

The device shown in Fig. 9 is adapted to my improved music with the staves printed in either direction, and is somewhat similar to that last described, only the music is turned by hand.

The title of the music is printed upon the covering-pieces C and upon the edges of the folded sheets A, as shown in Fig. 3, so that any particular piece of music can be readily found, and when the web is unfolded the title shall appear at the top of each side thereof.

I do not limit myself to the exact construction shown in this application, as the printed web of music might be modified in various ways, and there are many constructions of apparatus which are adapted to automatically turn my improved music, as my invention consists broadly of music printed in the continuous web and folded in the manner substantially as set forth, and also in the combination, with such music, of automatic means to turn the same.

In this application I do not claim specifically the mechanism to turn the music, as that will form subject-matter of future applications.

I am aware of the patent to Wood, December 17, 1878, French Patent No. 60,702, patents to Wegman, No. 251,977, and White, No. 227,083, and claim nothing therein shown or described. In the patent to Wood the sheet is continuous and rolled upon a cylinder or roller, and has no notes or folds, and the other patents are for musical instruments in which the moving jointed paper or pasteboard is provided with raised portions or projections which depress the keys of the instrument or organ, or they have holes cut therein through which currents of air pass to the reeds of the organ.

My invention is limited to printing ordinary bars, notes, &c., in horizontal rows, one above the other, across the sheet when made in a continuous web and folded.

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

1. Sheet-music having its bars and notes printed in horizontal rows across the sheet, one above the other, said sheet being in a continuous web, substantially as and for the purpose specified.

2. Sheet-music printed with the ordinary bars, notes, &c., in horizontal rows one above the other, and formed into a continuous web, said web being folded back and forth upon itself in alternately opposite directions, substantially as described.

3. Music printed in a continuous web, said web being folded back and forth upon itself in alternately opposite directions, and being provided on one or both of its ends with covers which protect or inclose the folded edges, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

THORWALD C. DAMBORG.

Witnesses:
R. M. HUNTER,
R. S. CHILD, Jr.