(No Model.)

R. BUTTERWORTH.

PROCESS OF MAKING MUSIC STRIPS.

No. 337,304. Patented Mar. 2, 1886.

Fig. 1

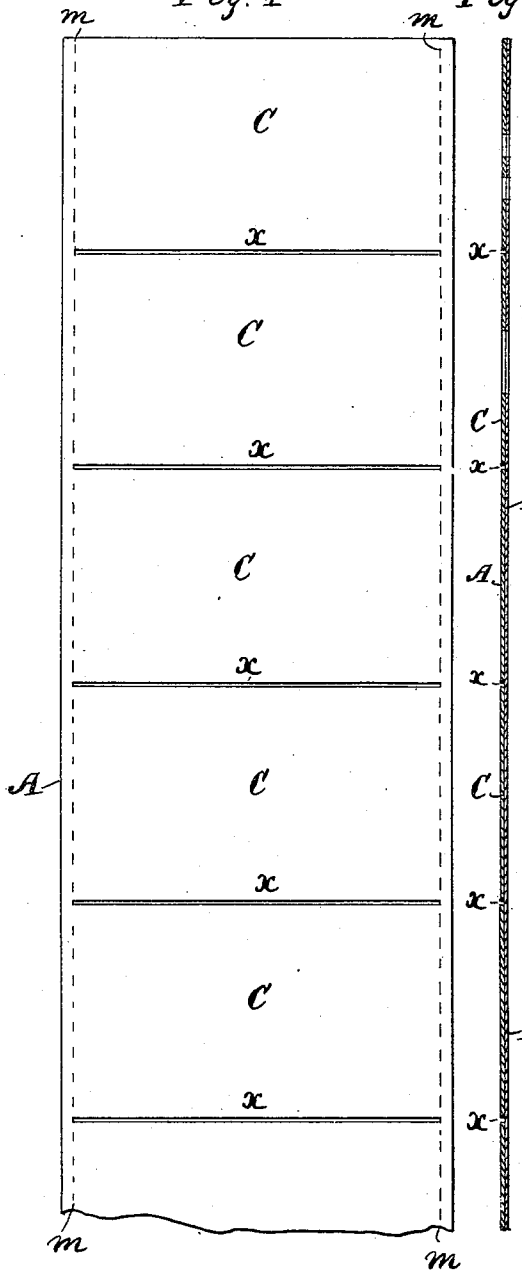
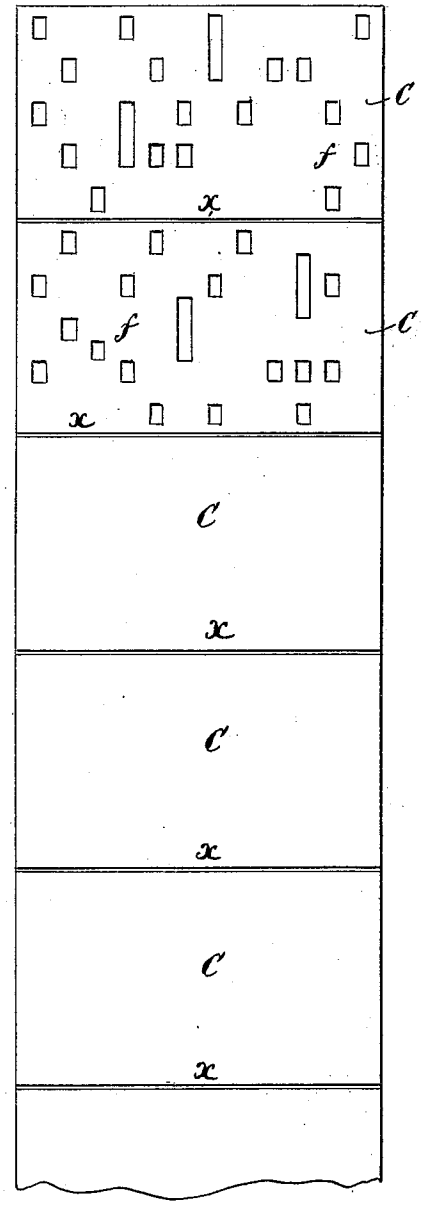


Fig. 3.

Fig. 2



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBERT BUTTERWORTH, OF SOMERVILLE, MASS., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE FIBERLENE COLLAR COMPANY, OF PORTLAND, ME.

PROCESS OF MAKING MUSIC-STRIPS.

SPECIFICATION forming part of Letters Patent No. 337,304, dated March 2, 1886.

Application filed June 9, 1885. Serial No. 168,194. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT BUTTERWORTH, of Somerville, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in the Process of Making Music Paper or Strips for Automatic Reed-Organs and other Similar Musical Instruments, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view representing the paper or pasteboard after being attached to the cloth and before it is trimmed; Fig. 2, a like view after it is trimmed, two of the plates being represented as perforated; and Fig. 3, a longitudinal section taken through the center of the strip shown in Fig. 2.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

In the manufacture of the music-paper or perforated strips used in automatic reed-organs and other similar musical instruments the paper or pasteboard plates are usually cut out separately and connected by cloth hinges, or hinges composed of cloth, leather, or some other flexible material, attached to the sides of the same near their ends. This method of constructing the paper or strip renders it impossible in all cases to so connect the plates as to leave them at uniform distances apart, and is, moreover, comparatively slow and expensive. Besides, the hinges are liable to break, and thus permit the plates to become torn or destroyed in use.

My invention is designed to obviate these objections, and to that end I make use of means which will be readily understood by all conversant with such matters from the following explanation, the simplicity of the invention rendering an elaborate description unnecessary.

In the drawings, A represents the paper or pasteboard, and B the cloth. The paper or pasteboard, which is of course of proper thickness and possessed of sufficient rigidity and hardness to render it adapted to the purpose, is first cut into a strip of any desired size, and punched by means of dies or other suitable mechanism to form the elongated slots *x*. These slots extend transversely nearly from side to side of the strip, and are disposed at regular intervals throughout its length, as seen in Fig. 1. After the paper or pasteboard has been punched to form the slots *x*, as described, it is pasted or cemented to the cloth B by any of the well-known processes or means in use for that purpose, the cloth having previously been cut into a piece corresponding in width and length with that of the paper or pasteboard. The blank thus formed is then trimmed lengthwise on either side by cutting through both of its parts on the dotted lines *m*, the longitudinal cuts being made just far enough from the edges of the blank to open the ends of the slots *x* outwardly through the trimmed edges, thereby dividing the paper or pasteboard into a series of plates, C, and leaving them hinged together at uniform distances apart by the cloth B, after which the plates are punched to form the perforations *f*, or, in accordance with the notes of the tune or music the strip is designed to assist in producing, the last-named perforations passing through the paper or pasteboard and also through the cloth.

As the blanks shown in Fig. 1 may be readily packed for transportation or storage, they can be made, if desired, and sold to the trade without perforating the plates C, as seen at *f*, these perforations being subsequently formed as required.

Having thus explained my invention, what I claim is—

1. The improved process of making music paper or strip blanks for automatic reed-organs and other similar musical instruments, herein described, the same consisting, essentially, in taking a piece of paper or pasteboard of suitable width and length and a corresponding piece of cloth, punching a series of elongated transverse slots in the paper or pasteboard at regular intervals, pasting or cementing the cloth to the paper or pasteboard, and

then trimming the cloth and paper or cloth and pasteboard longitudinally in such a manner as to open the ends of said transverse slots, substantially as set forth.

2. The improved process of making music-paper or perforated strips for automatic reed-organs and other similar musical instruments, herein described, the same consisting, essentially, in taking a piece of paper or pasteboard of suitable width and length and a corresponding piece of cloth, punching a series of elongated transverse slots in the paper or pasteboard at regular intervals, pasting or cementing the cloth to the paper or pasteboard, trimming the cloth and paper or cloth and pasteboard longitudinally in such a manner as to open the ends of said transverse slots, and then punching a series of holes in the paper or pasteboard plates thus formed, corresponding with the notes of the tune or music the strip is designed to aid in producing, substantially as described.

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Witnesses:
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