

H. GÜNTHER.
ATTACHMENT FOR MUSICAL INSTRUMENTS.
APPLICATION FILED OCT. 10, 1908.

938,142.

Patented Oct. 26, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

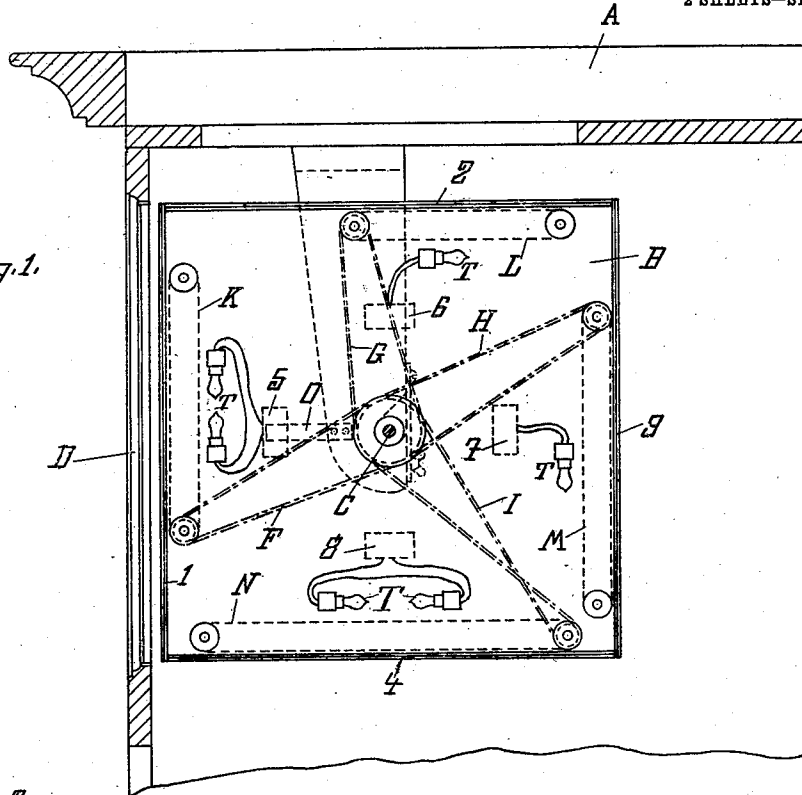
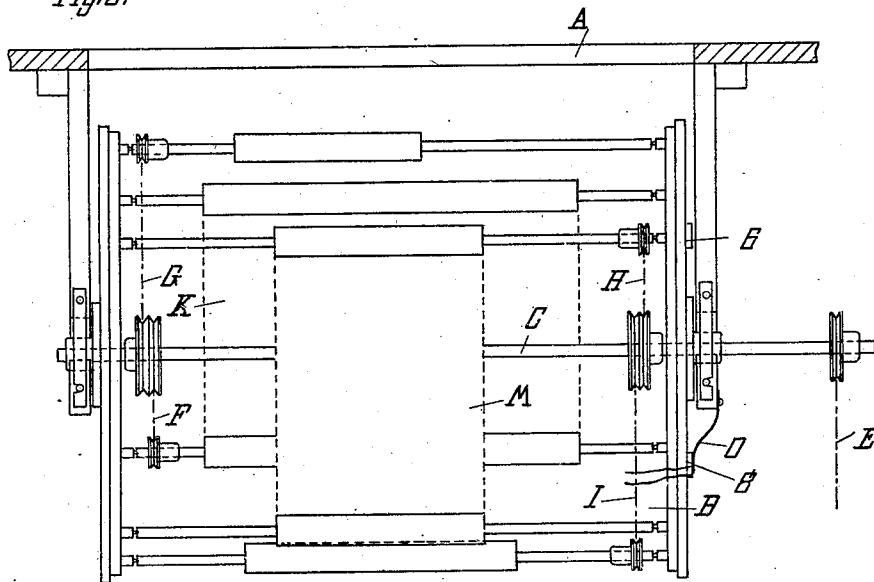


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.



Fig. 4.

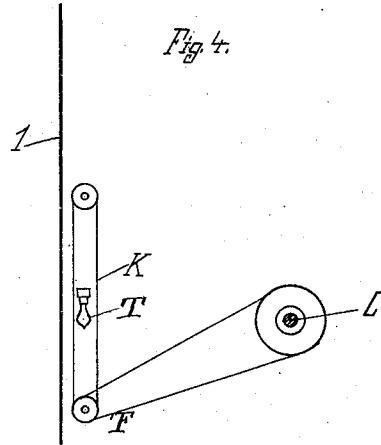


Fig. 5.



Fig. 6.

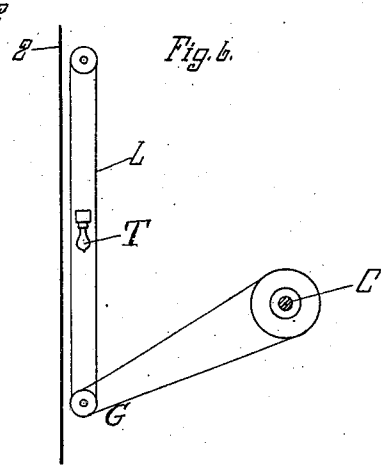
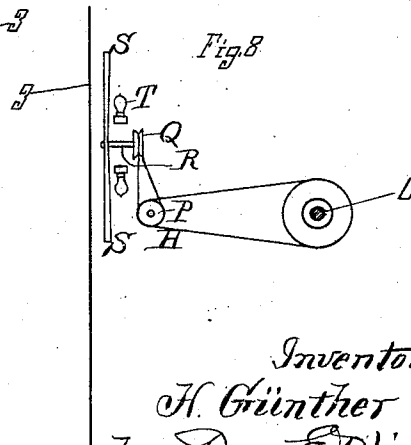


Fig. 7.



Fig. 8.



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ATTACHMENT FOR MUSICAL INSTRUMENTS.

938,142.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, HERMANN GÜNTHER, a subject of the German Emperor, residing at Leipzig-Gohlis, German Empire, have invented certain new and useful Improvements in Attachments for Musical Instruments, of which the following is a specification.

My invention relates to an attachment for musical instruments whose box or case is furnished with pictures of a translucent character. For the purpose of facilitating change of the pictures it is a common practice to locate a number of them on the periphery of a rotatable drum, whereby any picture can be readily brought before the window of the case, as desired. This method, however, is difficult to apply in the case of pictures exhibiting motion. To overcome this difficulty I employ the shaft of the rotary picture-drum simultaneously as driving-shaft for the motion-mechanism of the pictures.

My invention is illustrated in the accompanying drawing, in which—

Figure 1 is a sectional end view, and Fig. 2 a sectional side view of a portion of a musical instrument to which my invention is applied. Figs. 3, 5 and 7 are face views of pictures having moving parts, and Figs. 4, 6 and 8 are edge views of the means for driving the bands for the corresponding pictures of Figs. 3, 5 and 7.

In suitable bearings in the interior of the case A of the musical instrument there is mounted on a rotary shaft C a square drum B, whose pictures 1, 2, 3, 4 can be brought in front of the window D of the case A as desired.

According to my invention the shaft C of the drum is also used as driving-shaft for the motion-mechanism of the pictures. For this purpose a cord E may be provided for driving the motion-mechanism as a whole, and other cords furnished for driving the motion-contrivances of each individual picture.

In the particular constructive form of the apparatus illustrated in Fig. 1 the cord F drives the endless band K for the picture 1, the cord G the endless band L for the picture 2, the cord H the endless band M for the picture 3, and the cord J the endless band N for the picture 4. In Fig. 8 I show the cord H running around a pulley P to a pulley Q on a shaft R at a right angle to shaft C, said

shaft R carrying the arms S representing the sails of a windmill, as seen in Fig. 7. These endless bands K, L, M, N are used for producing motion on the pictorial surfaces behind which they are located, so as to exhibit, for example, the flowing water of a cascade, as in Fig. 3, a fountain as in Fig. 5, or the like, which is graphically represented. The endless bands may consist of any suitable translucent material, such as gauze or other fabric adapted to allow the passage of light from the luminous sources accommodated in the drum, such for instance as electric lights T shown in Fig. 1 behind the bands K, L, M, N, in Figs. 4 and 6, between the two parts of the bands K and L and in Fig. 8 behind the arms S.

By means of the driving-cords any other desired motion may naturally be produced, for instance the rotary motion of a wheel, of the sails of a windmill, or the like.

Fig. 3 shows a pictorial surface 1 with a waterfall U while Fig. 4 shows the band K and its driving mechanism. The surface in Fig. 3 in which the waterfall is depicted as descending, has behind it a gauze band driven in the direction of the fall of the water by means of the cord F from a pulley on the shaft C. The gauze band is transparent and as shown in Fig. 3, at U, is provided with lines or markings so arranged that the surface of the waterfall will exhibit the appearance of downwardly running water. The illumination in this instance is by means of an electric light T between the two oppositely running portions of the gauze band K, so that its rays are projected through one thickness only of said band.

The mechanism shown in Fig. 6 for causing the effect of a fountain as illustrated in Fig. 5, is substantially similar to that of Fig. 3 just described, the illumination being produced in the same manner.

In Fig. 8, however, as hereinbefore described, the mechanism causes the rotation of arms S behind a space in the picture indicated by the dotted circle in Fig. 7, the effect of the illuminants in this instance throwing the shadows of the arms upon said picture space in Fig. 7, and creating the appearance of rotating sails W of a windmill.

Instead of being rectangular the drum may obviously be round. The pictures may be on glass or on other transparent or translucent material, and they may be illuminated

in any appropriate manner, such as by oil, gas or electricity.

If incandescent electric lamps are used, as shown in the drawing, the electric circuit may be made by means of a contact-spring *O* passing over contact-plates 5, 6, 7, 8. In this manner only that particular lamp (or lamps) is cut in which is located behind the picture which is for the time being displayed at the window *D*.

In place of cords any other suitable driving-means may naturally be employed. In the drawing driving gear is shown provided at both sides of the drum, but if desired the gear for all four pictorial surfaces may be located at one side of the drum.

Having thus described my invention, I declare that what I claim as new and desire to secure by Letters Patent of the United States is—

1. In an attachment for a musical instrument, a rotatable picture-drum, a shaft carrying the same, means for producing motion in the pictorial representations, a luminous source located behind the same, means for driving said shaft, and means for transmitting the motion of the latter to the first said means, substantially as described.

2. In an attachment for a musical instrument, a rotatable picture-drum, a shaft carrying the same, endless translucent bands

mounted in the drum, a luminous source located behind said bands, means for driving said shaft, and means for transmitting the motion of the latter to said bands, substantially as described.

3. In an attachment for a musical instrument, a rotatable picture-drum, a shaft carrying the same, endless translucent bands mounted in the drum, a luminous source located behind said bands, means for driving said shaft, and cord and pulley gear for transmitting the motion of the latter to said bands, substantially as described.

4. In an attachment for a musical instrument, a rotatable picture-drum, a shaft carrying the same, endless translucent bands mounted in the drum, an open electric circuit containing a lamp located behind each band, a contact-spring projecting from said shaft and adapted to close the electric circuits, means for driving said shaft, and means for transmitting the motion of the latter to said bands, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HERMANN GÜNTHER.

Witnesses:

ALBERT BECKER,
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